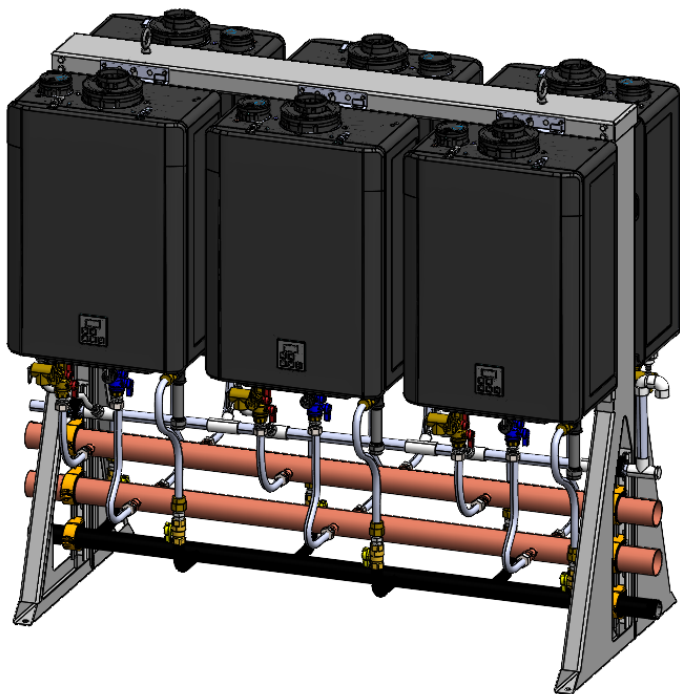


Tankless Rack System (TRS) with SENSEI™ CX Tankless Water Heaters

Installation Instructions



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

Rinnai®

1. Welcome

Thank you for purchasing a Rinnai Tankless Rack System (TRS). This manual provides instructions on installing a TRS. For specific questions on the Rinnai Tankless Water Heaters, refer to the “Rinnai Tankless Water Heater Installation and Operation Manual” supplied with each water heater in the rack system. Read this manual completely before installing the TRS.

To The Installer

- It is recommended that a trained and qualified professional who has attended a Rinnai installation training class complete the installation. Improper installation may void the warranty.
- The trained and qualified professional should have skills such as:
 - Gas line sizing
 - Connecting gas lines, water lines, valves, and electricity
 - Knowledge of applicable national, state, and local codes
 - Installing venting through a wall or roof
 - Training in installation of tankless water heaters. Training on Rinnai Tankless Water Heaters is accessible at rinnaiapro.myabsorb.com.
- Read all instructions in this manual before installing the TRS. The TRS must be installed according to the exact instructions in this manual.
- In addition to this manual, you will also need the “Rinnai Tankless Water Heater Installation and Operation Manual” for specific water heater installation information, such as clearances, venting options and parameter settings. A copy is provided with each tankless water heater in the rack system.
- Proper installation is the responsibility of the installer.
- When installation is complete, leave this manual with the rack system or give the manual directly to the consumer.

To The Consumer

- As when using any appliance generating heat, there are certain safety precautions you should follow. See the “Safety Precautions” section in this manual for detailed safety precautions.
- It is recommended that a trained and qualified professional who has attended a Rinnai installation training class complete your installation.
- Keep this manual for future reference.

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IMPORTANT: Set aside the “Rinnai Tankless Water Heater Installation and Operation Manual” as you will need to reference clearances, venting options, and other information specific to the water heaters. A copy is provided with each tankless water heater in the rack system.

If You Need Service

Contact Rinnai Commercial Water Heating Services

800-621-9419

commercialservices@rinnai.us

**READ AND SAVE
THESE INSTRUCTIONS**

2. About

Rinnai's Tankless Rack System (TRS) is designed to supply a packaged water heating solution as a fully assembled system. The TRS includes preassembled water and gas connections and manifolds under the tankless water heaters that are properly sized to maintain optimum performance.

TRS systems include wall-hanging, wall-mounted and free-standing configurations.

The TRS features design details that make installation simple and straightforward:

- Maneuverability: Fits fully assembled through standard 32-inch doorways and on elevators.
- Flexibility: Available for indoor and outdoor installations.
- Preassembled gas and water manifolds are properly sized to maintain optimum performance.
- Racks are constructed of powder-coated aluminum to stand up to the most demanding commercial environments while minimizing weight.
- Optional electronic controls to obtain turn down ratios of up to 327:1 (sold separately).

The TRS is designed for use with Rinnai Tankless Water Heaters only. Do not mount non-Rinnai tankless water heaters on the TRS.

3. Safety

WARNING

- If the information in these instructions is not followed exactly, a fire or explosion may result causing property damage, personal injury, or death.
- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- WHAT TO DO IF YOU SMELL GAS:
 - Do not try to light any appliance.
 - Do not touch any electrical switch; do not use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
 - If you cannot reach your gas supplier, call the fire department.
- Installation and service must be performed by a qualified installer, service agency or the gas supplier.
- The warning signs in this manual are here to prevent injury to you and others. Please follow them explicitly.

Safety Symbols

This manual contains the following important safety symbols. Always read and obey all safety messages.



Safety alert symbol. Alerts you to potential hazards that can kill or hurt you and others.



WARNING Indicates a potentially hazardous situation which, if not avoided, could result in personal injury or death.



DANGER Indicates an imminently hazardous situation which, if not avoided, will result in personal injury or death.



CAUTION Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It may also be used to alert against unsafe practices.

Safety Precautions

The following precautions apply to the installer and consumer. Read and follow all instructions in this section.



WARNING

DO NOT adjust the internal gas valve. The design is such that adjustment is not required. Warranty will be voided if the internal gas valve is adjusted.

- Before operating, smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.
- Keep the area around the appliance clear and free from combustible materials, gasoline, and other flammable vapors and liquids.
- Combustible construction refers to adjacent walls and ceiling and should not be confused with combustible or flammable products and materials. Combustible and/or flammable products and materials should never be stored in the vicinity of this or any gas appliance.
- To protect yourself from harm, before performing maintenance:
 - Turn off the electrical power supply by unplugging the power cord or by turning off the electricity at the circuit breaker. (The temperature controller does not control the electrical power.)
 - Turn off the gas at the manual gas control valve, usually located immediately below the water heater.
 - Turn off the incoming water supply. This can be done at the isolation valve immediately below the water heater or by turning off the water supply to the building.
 - Use only your hand to turn the manual gas control valve. Never use tools. If the manual gas control valve will not turn by hand, do not try to repair it; call a trained and qualified professional. Force or attempted repair may result in a fire or explosion.
- Do not use this appliance if any part has been under water. Immediately call a licensed professional to inspect the appliance and to replace any part of the control system and any manual gas control valve which has been under water. Do not use substitute materials. Use only parts certified for the appliance.
- Should overheating occur or the gas supply fail to shut off, turn off the manual gas control valve to the appliance.
- Only trained and qualified professionals are permitted to adjust parameter settings.
- Do not use an extension cord or adapter plug with this appliance.
- Any alteration to the appliance or its controls can be dangerous and will void the warranty.
- Proper venting is required for the safe operation of this appliance.
- Flammable liquids such as cleaning solvents, aerosols, paint thinners, adhesives, gasoline and propane must be handled and stored with extreme care. These flammable liquids emit flammable vapors and when exposed to an ignition source can result in a fire hazard or explosion. Flammable liquids should not be used or stored in the vicinity of this or any other gas appliance.
- DO NOT operate the water heater without the front panel installed. The front panel should only be removed for service/maintenance or replacing internal components.
- BURN HAZARD. Hot exhaust and vent may cause serious burns. Keep away from the water heater. Keep small children and animals away from the water heater.
- Hot water outlet pipes leaving the water heater can be hot to touch.
- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- Install the vent system per local and national codes.
- Do not install the water heaters above 10,200 ft (3,109 m).
- Do not obstruct combustion air to the water heaters.
- Failure to properly vent this appliance can result in death, personal injury and/or property damage.
- Rinnai recommends that every home have a carbon monoxide (CO) alarm in the hallway near bedrooms in each sleeping area. Check batteries monthly and replace them annually.

4. Configurations







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


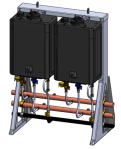

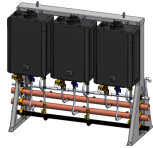
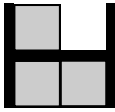
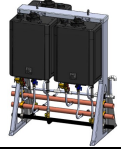

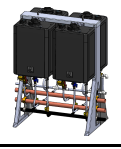
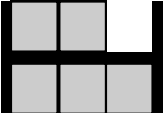

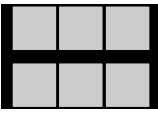
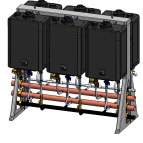
CX Series			
Part No.*	Rack Type	Configuration	Illustration
TRW02CXiN	2-unit interior wall-hanging rack, NG		
TRW03CXiN	3-unit interior wall-hanging rack, NG		
TRX02CXiN	2-unit interior compact wall-mount rack, NG		

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

Free-Standing Racks

Part No.*	Rack Type	Configuration	Illustration
TRS02ILCXiN	2-unit INLINE interior free-standing rack, NG		
TRS03ILCXiN	3-unit INLINE interior free-standing rack, NG		
TRS03CXiN	3-unit interior free-standing rack, NG		
TRS04CXiN	4-unit interior free-standing rack, NG		
TRS05CXiN	5-unit interior free-standing rack, NG		
TRS06CXiN	6-unit interior free-standing rack, NG		

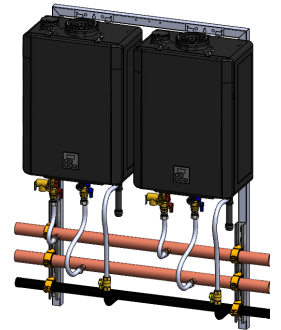
* Part No. Legend:

- 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

5. Specifications

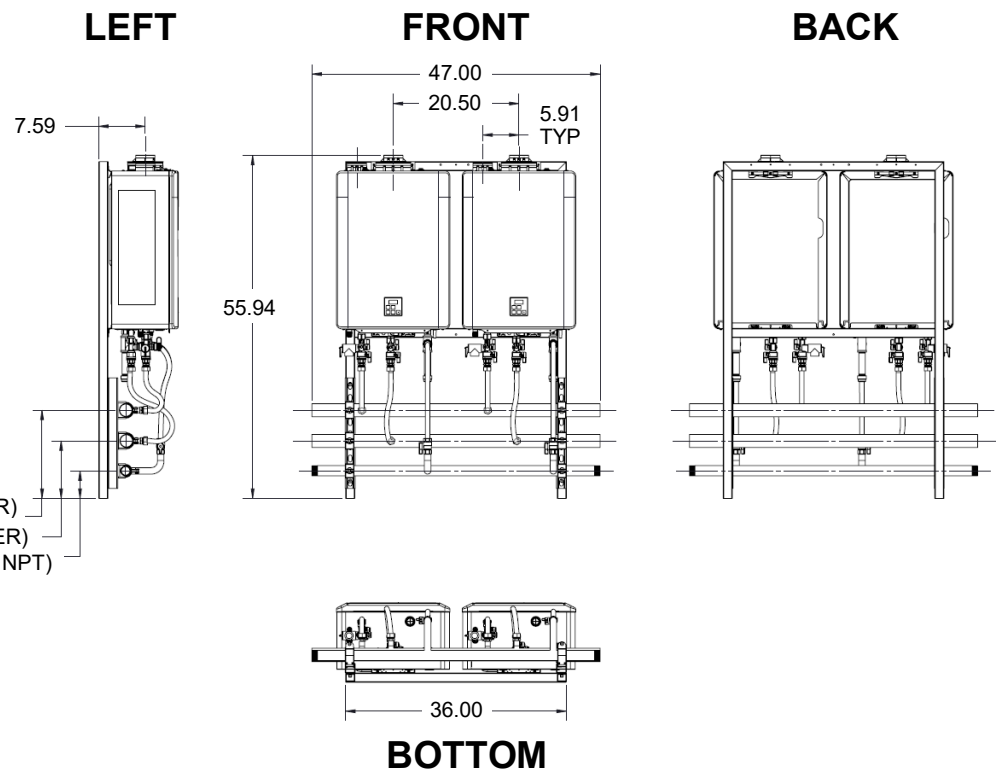
WALL-HANGING RACKS

- Available Configurations**
- 2-Units
 - 3-Units



CX and CXP Series

2-Unit Wall-Hanging Frame

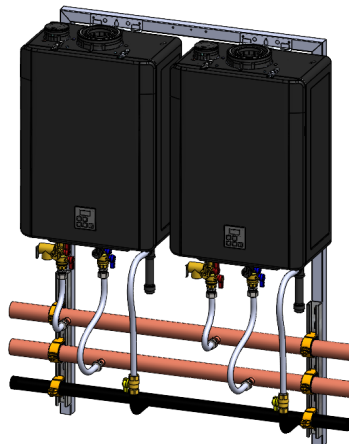


Model	Configuration	Illustration
TRW02CX		

CX and CXP Series 2-Unit Wall-Hanging Frame (Continued)

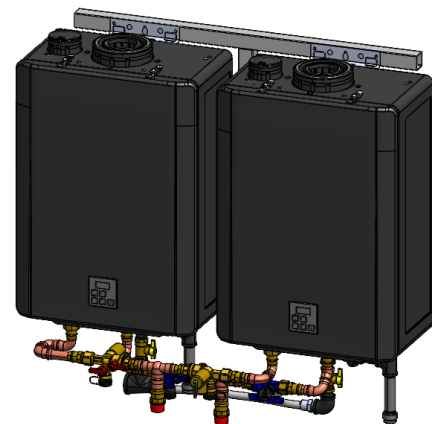
Model	TRW02CXi	TRW02CXPi
Water Heater Model	CX199i (NG/LP) / CXP199i (NG/LP)	
Crate Dimensions (HxLxD) - in	66 x 70 x 35	
Weight - Fully Assembled - lbs	153	
Weight - Shipping (total) - lbs	363	
Rack Frame - Specifications		
Frame Material	Aluminum	
Frame Finish	Powder Coat	
Color	Gray	
Water & Gas Connections		
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)	8	
BTU and Flow Rates for CX199i (NG/LP)		
Number of Tankless Water Heaters	2	
Flow rate @ 70°F rise (gpm)	10.8	
Flow rate @ 100°F rise (gpm)	7.6	
Minimum input rate (Btuh)	15,000	
Maximum input rate (Btuh)	398,000	

TRW02CX / TRW02CXP

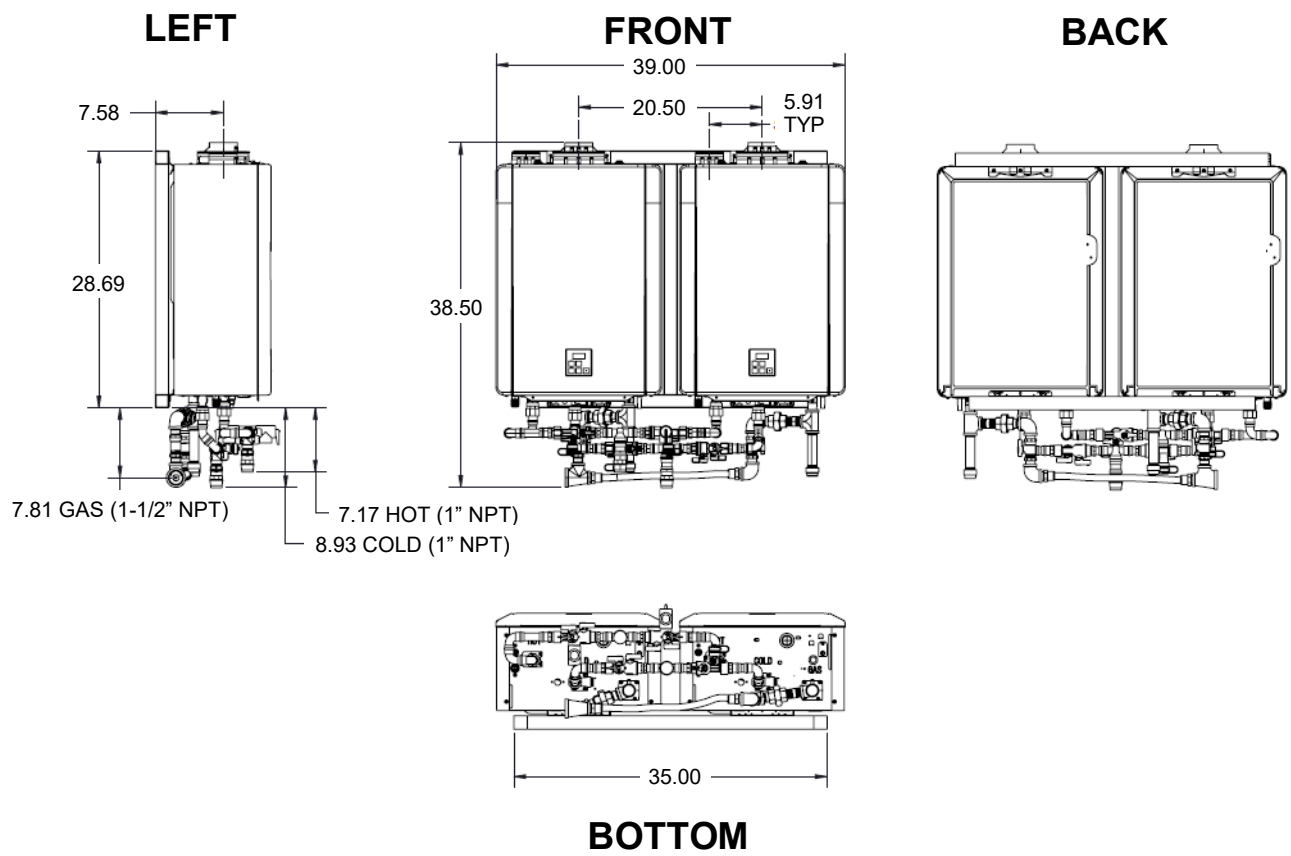


WALL-HANGING RACKS → CX SERIES

Available Configurations
 • 2-Units



CX Series **2-Unit Compact Wall-Mount Frame**

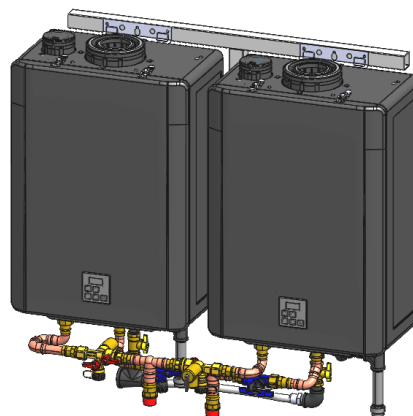


Model	Configuration	Illustration
TRX02CX		

CX Series 2-Unit Compact Wall-Mount Frame (Continued)

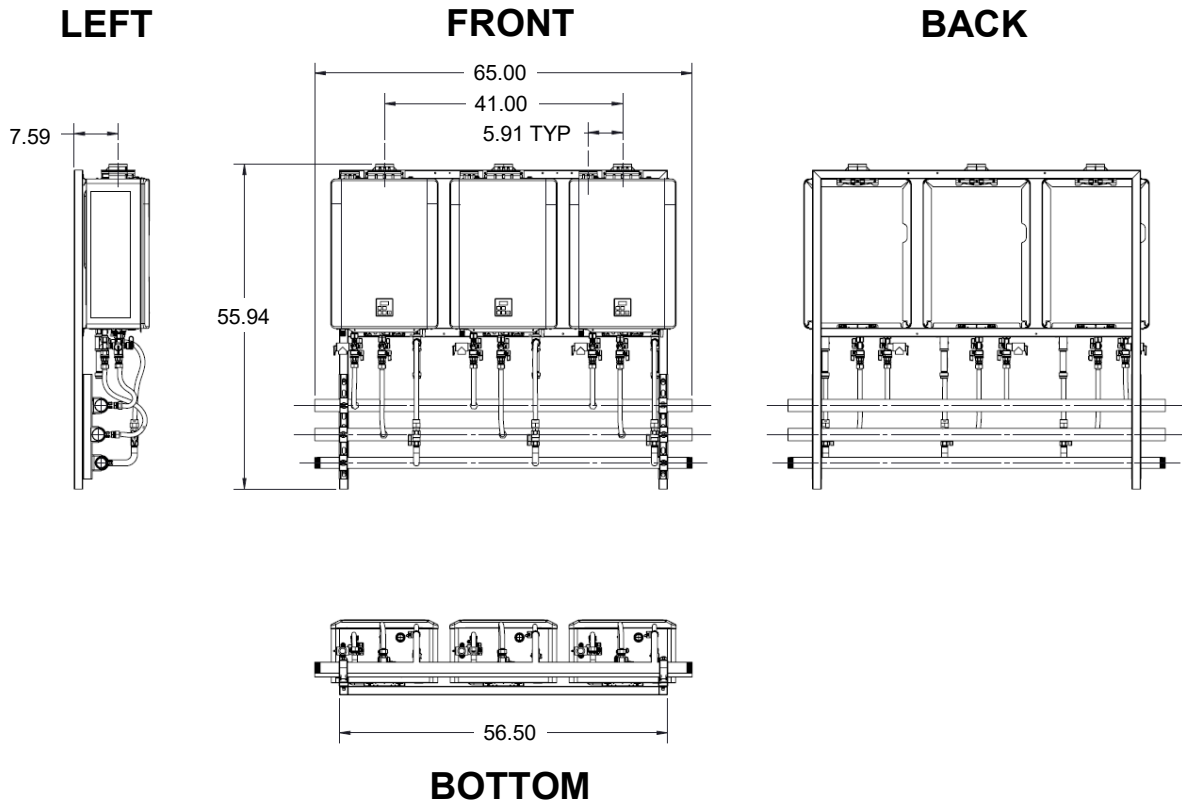
Model	TRX02CX
Water Heater Model	CX199i (NG/LP)
Crate Dimensions (HxLxD) - in	46 x 42 x 48
Weight - Fully Assembled - lbs	160
Weight - Shipping (3 components) - lbs	540
Rack Frame - Specifications	
Frame Material	Aluminum
Frame Finish	Powder Coat
Color	Gray
Water & Gas Connections	
Hot Water Trunk Line Diameter	1 in.
Cold Water Trunk Line Diameter	1 in.
Hot Water Trunk Line Material	Rigid Copper
Cold Water Trunk Line Material	Rigid Copper
Water Trunk Connection Type	1 in. MNPT
Gas Trunk Line Diameter	1-1/2 in.
Gas Trunk Connection Type	1-1/2 in. MNPT
Gas Trunk Line Material	Schedule 40 Steel
Gas Branch Line Material	PVC Over CSST
Electric Requirements	
Voltage	AC 120 Volts - 60 Hz
Maximum Current (Amperes)	8
BTU and Flow Rates for CX199i (NG/LP)	
Number of Tankless Water Heaters	2
Flow rate @ 70°F rise (gpm)	10.8
Flow rate @ 100°F rise (gpm)	7.6
Minimum input rate (Btuh)	15,000
Maximum input rate (Btuh)	398,000
Accessories	
Cascade Controls - REU-EZC-3	Pre-installed
Offset Wall Bracket	Included
Free Standing Leg Kit	Optional Accessory


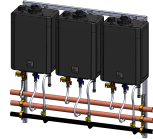
TRX02CX



CX and CXP Series

**3-Unit
Wall-Hanging
Frame**

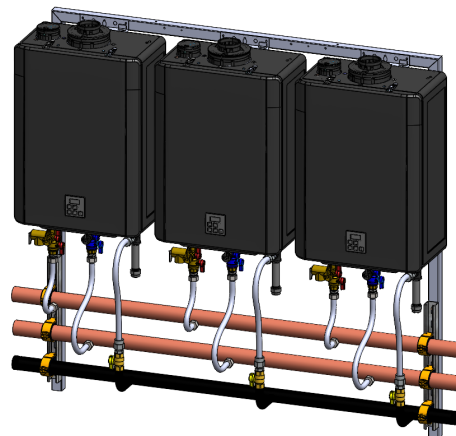


Model	Configuration	Illustration
TRW03CX		

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	

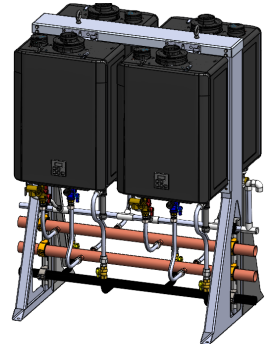
TRW03CX / TRW03CXP



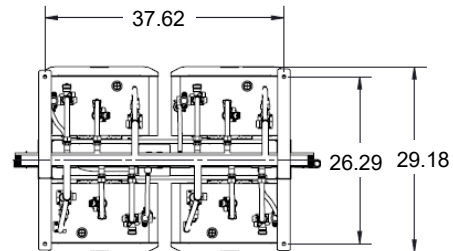
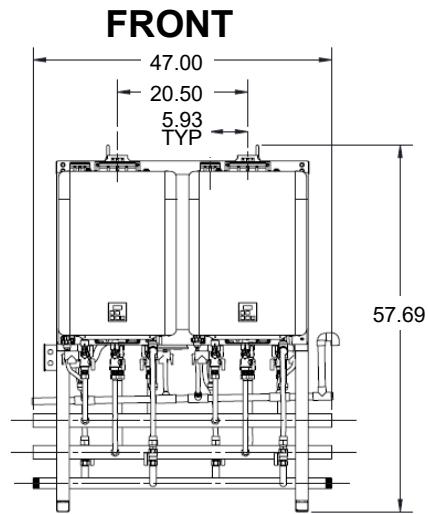
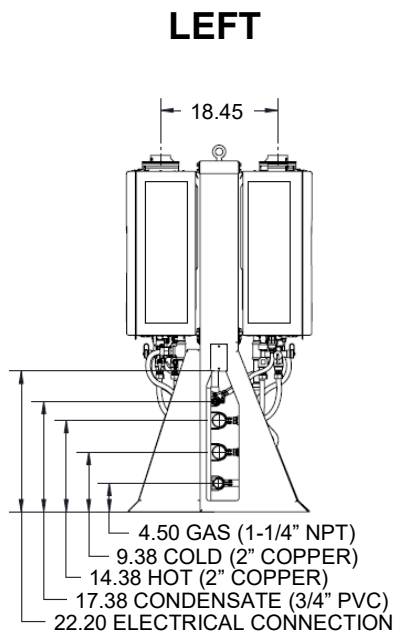
FREE-STANDING RACKS

Available Configurations

- 2-Units, 3-Units, 4-Units, 5-Units, 6-Units



4-Unit Free-Standing Frame



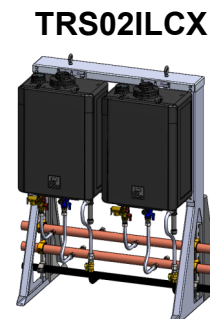
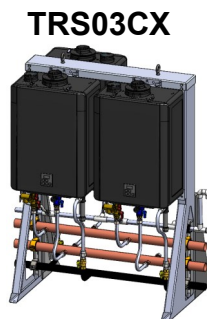
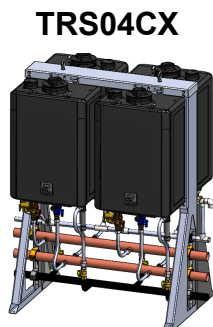
BOTTOM

Model	Configuration	Illustration
TRS04CX		
TRS03CX		

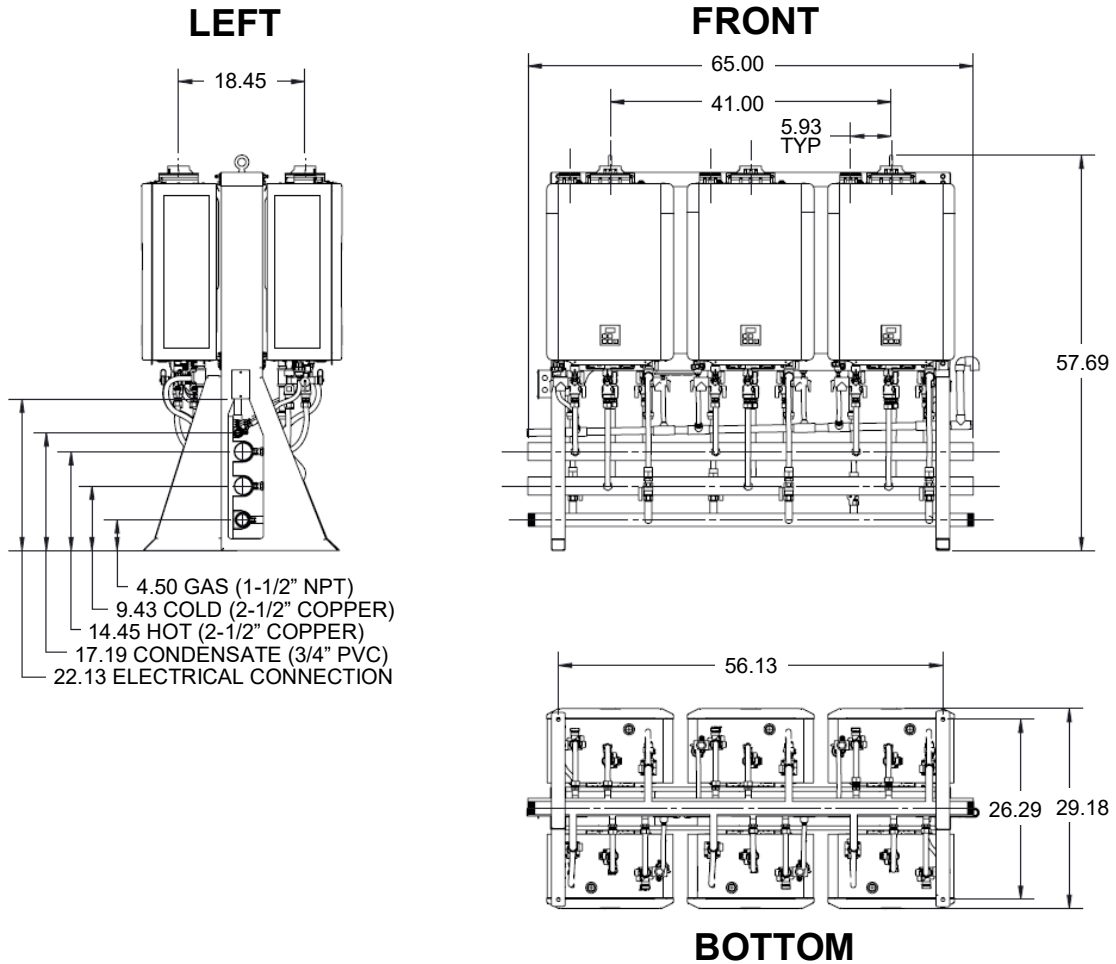
Model	Configuration	Illustration
TRS02ILCX	 Inline (facing same direction)	

4-Unit Free-Standing Frame (Continued)

Model	TRS04CX	TRS03CX	TRS02ILCX
Water Heater Model	CX199i (NG/LP)		
Crate Dimensions (HxLxD) - in	66 x 70 x 35		
Weight - Fully Assembled - lbs	365	290	214
Weight - Shipping (total) - lbs	562	490	416
Rack Frame - Specifications			
Frame Rail Type	Sheet Metal		
Frame Material	Aluminum (0.090 5052-H32)		
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 Trunk Branch Line Material	PVC Over CSST		
Condensate Trunk Line Diameter	3/4"		N/A
Condensate Trunk Material	Sch - 40 PVC		N/A
Condensate Trunk Connection Type	3/4" Pipe		N/A
Electric Requirements			
Prewired Electrical Assembly	Yes		N/A
Voltage	AC 120 Volts - 60 Hz		
Maximum Current (Amperes)	16	12	8
BTU and Flow Rates for CX199i (NG/LP)			
Number of Tankless Water Heaters	4	3	2
Flow rate @ 70°F rise (gpm)	21.6	16.2	10.8
Flow rate @ 100°F rise (gpm)	15.2	11.4	7.6
Minimum input rate (Btuh)	15,000		
Maximum input rate (Btuh)	796,000	597,000	398,000



6-Unit Free-Standing Frame

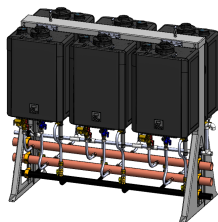


Model	Configuration	Illustration	Model	Configuration	Illustration
TRS06CX			TRS03ILCX		
TRS05CX					

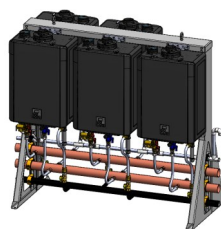
6-Unit Free-Standing Frame (Continued)

Model	TRS06CX	TRS05CX	TRS03ILCX
Water Heater Model	CX199i (NG/LP)		
Crate Dimensions (HxLxD) - in	66 x 70 x 35		
Weight - Fully Assembled - lbs	540	465	315
Weight - Shipping (total) - lbs	737	662	512
Rack Frame - Specifications			
Frame Rail Type	Sheet Metal		
Frame Material	Aluminum (0.090 5052-H32)		
Frame Finish	Powder Coat		
Color	Gray		
Water & Gas Connections			
Hot Water Trunk Line Diameter	2-1/2"		2"
Cold Water Trunk Line Diameter	2-1/2"		2"
Hot Water Trunk Line Material	Rigid Copper		
Cold Water Trunk Line Material	Rigid Copper		
Water Trunk Connection Type	2-1/2" PIPE		2" PIPE
Gas Trunk Line Diameter	1-1/2"		1-1/4"
Gas Trunk Connection Type	1-1/2" MNPT		1-1/4"MNPT
Gas Trunk Line Material	Sch 40 Steel		
Gas Branch Line Material	PVC Over CSST		
Condensate Trunk Line Diameter	3/4"		
Condensate Trunk Line Material	Sch - 40 PVC		
Condensate Trunk Connection Type	3/4" Pipe		
Electric Requirements			
Prewired Electrical Assembly	Yes		
Voltage	AC 120 Volts - 60 Hz		
Max Current (Amperes)	24	20	12
BTU and Flow Rates for CX199i (NG/LP)			
Number of Tankless Water Heaters	6	5	3
Flow rate @ 70°F rise (gpm)	32.4	27.0	16.2
Flow rate @ 100°F rise (gpm)	22.8	19.0	11.4
Minimum input rate (Btuh)	15,000		
Maximum input rate (Btuh)	1,194,000	995,000	597,000

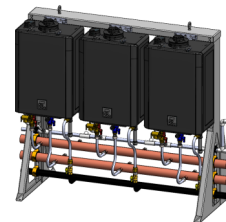
TRS06CX



TRS05CX



TRS03ILCX



6. Installation

Clearances

When selecting an installation location, you must ensure the tankless water heaters mounted on the rack comply with the required clearances. For clearance requirements, refer to the “Rinnai Tankless Water Heater Installation and Operation Manual” supplied with each water heater in the rack system.

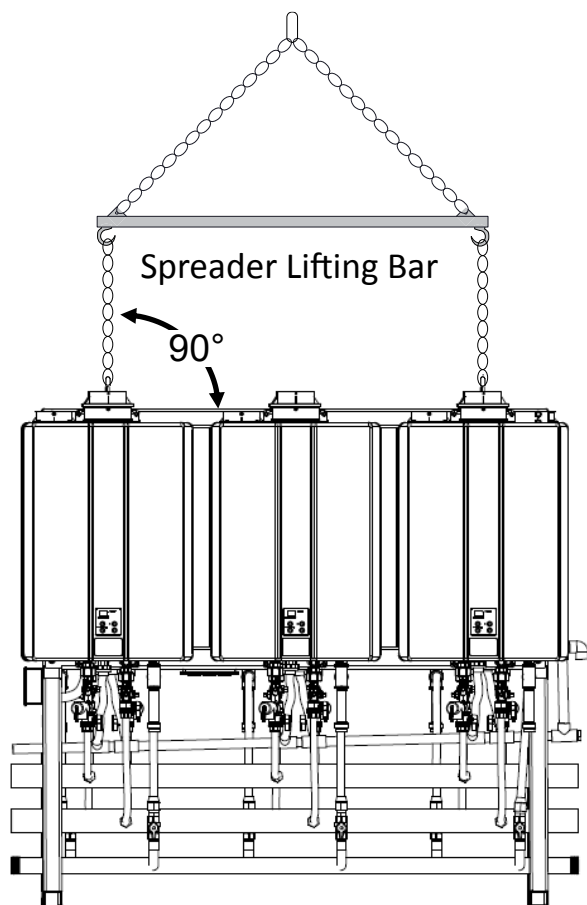
Lift the Rack

Hoisting Lifting Lugs

Lugs are installed on the top side of the following racks for hoisting and moving. The lines or cables to the lugs should be at a 90° angle. Use a spreader lifting bar to hoist the racks.

Weights of the complete assemblies are available in the **Specifications** section of this manual.

DO NOT hoist the crate or palette.

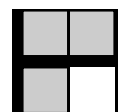


Models Available with Lifting Lugs

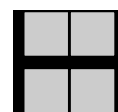
TRS021LCX



TRS03CX



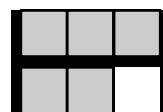
TRS04CX



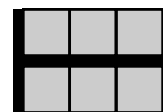
TRS031LCX



TRS05CX



TRS06CX



Hoisting Straps (Supplied by Installer)

For TRW02 and TRW03 wall hanging racks, use hoisting straps (supplied by installer) looped around the top frame.

Weights of the complete assemblies are available in the **Specifications** section of this manual.

DO NOT hoist the crate or palette.

Models Designed for Hoisting Straps

TRW02CX



TRW03CX



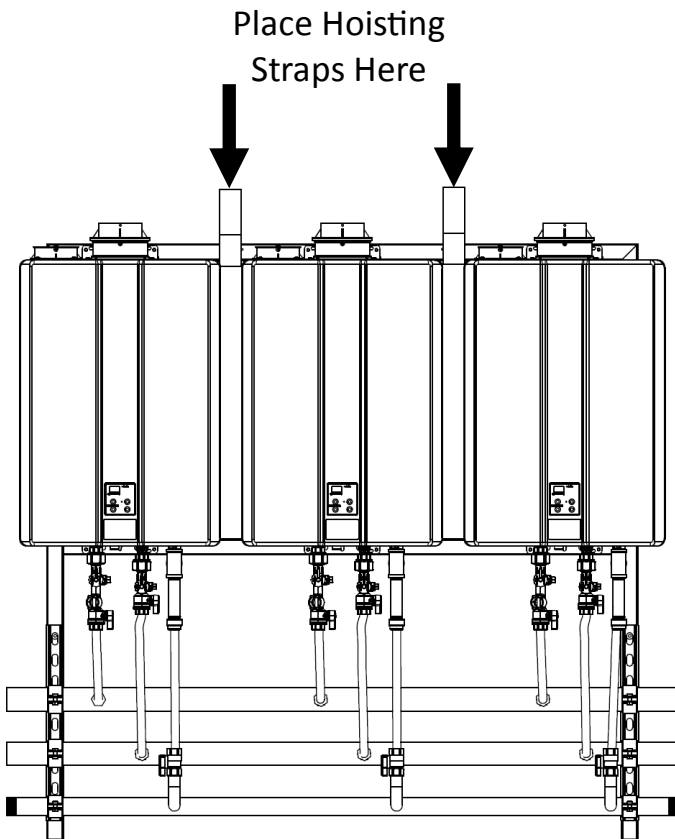
TRW02CXP



TRW03CXP



TRX02CX



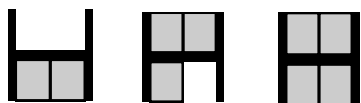
Secure the Rack

Secure Free-Standing Racks

All mechanical components shall be anchored and installed in accordance with national and/or local codes having jurisdiction. Base holes to secure all free-standing rack systems are 0.563 inches in diameter. Reference local codes regarding minimum concrete thickness and use appropriate expansion anchors that are capable of supporting the rack system weight. For outdoor installations, anchors must be capable of supporting the rack system weight and wind shear. Reference and follow the anchor manufacturer's use and installation requirements.

Free-standing rack models include:

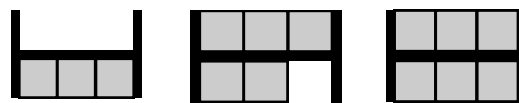
TRS02ILCX TRS03CX TRS04CX



TRS03ILCX

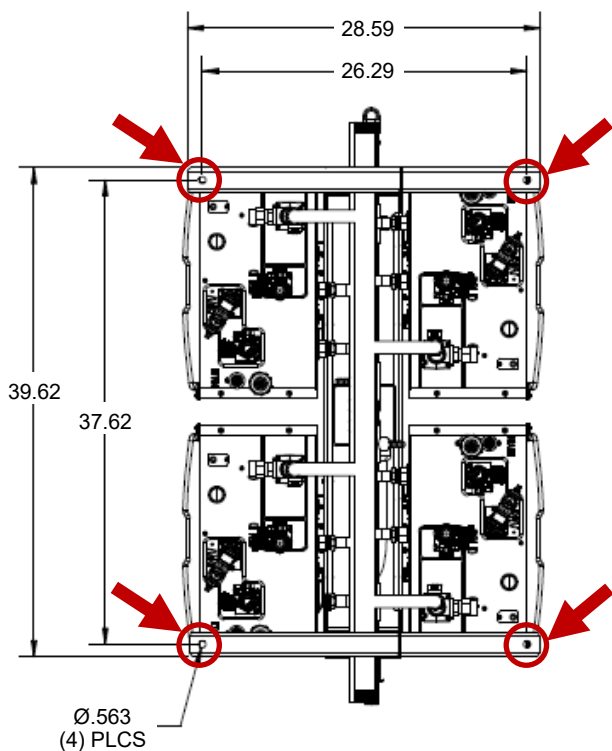
TRS05CX

TRS06CX



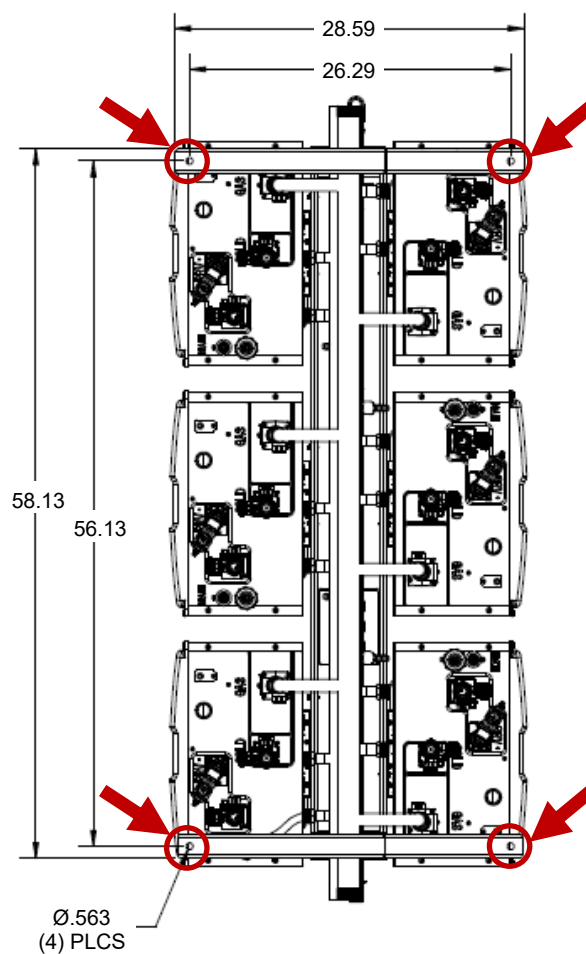
Free-Standing Racks Bottom View

Base Holes on 4-Unit Rack



Flex line illustrations have been removed for clarity.

Base Holes on 6-Unit Rack



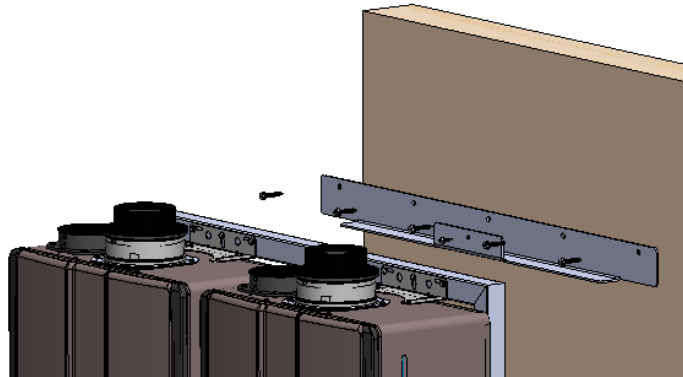
Secure Wall-Hanging Racks (TRW Models)

⚠ WARNING THE WALL MUST BE CAPABLE OF CARRYING THE OPERATING WEIGHT OF THE INSTALLED TRS SYSTEM. CONSULT A STRUCTURAL ENGINEER FOR STRUCTURAL ANALYSIS OF THE WALL AND APPROPRIATE HANGING METHODS BEFORE ATTEMPTING TO HANG THE TRS SYSTEM. FAILURE TO COMPLY WITH THE ABOVE REQUIREMENT COULD RESULT IN SUBSTANTIAL PROPERTY DAMAGE, SEVERE PERSONAL INJURY OR DEATH.

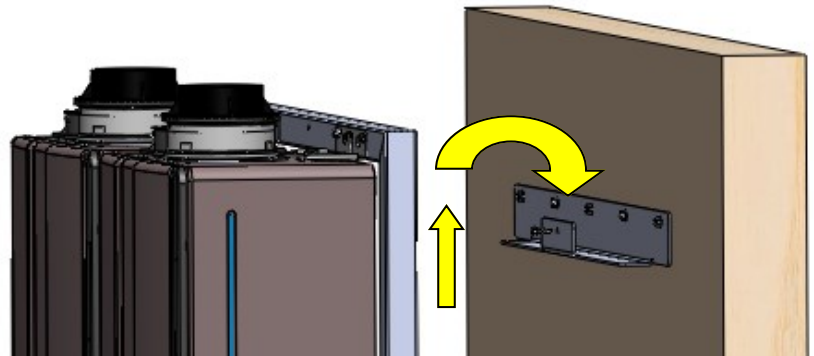
- Identify the installation location and confirm that the installation will meet all required clearances.
- In the event of a conflict or inconsistency between items indicated in this manual regarding code requirements, the more stringent standard shall prevail.
- Wall-hanging rack models include: TRW02CX, TRX02CX, TRW03CX, TRW02CXP, TRW03CXP

Instructions

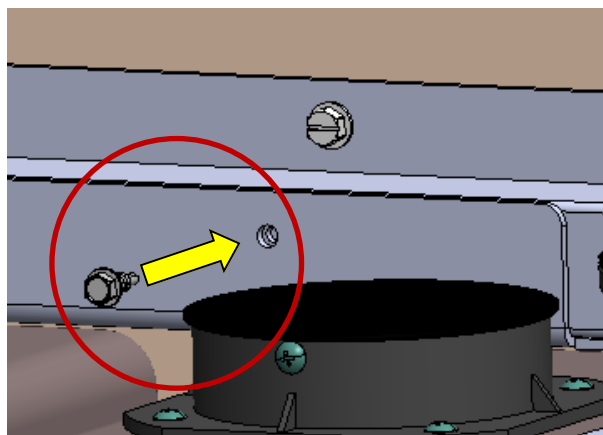
1 Using the holes in the wall hanging bracket, securely attach the bracket level to the wall. Ensure that the attachment strength is sufficient.



2 Lift the wall hanging rack and insert the top of the frame into the bracket.



3 Secure the front of the bracket to the front of the wall hanging frame with a #12 X 3/4 drill point screw.



7. Venting

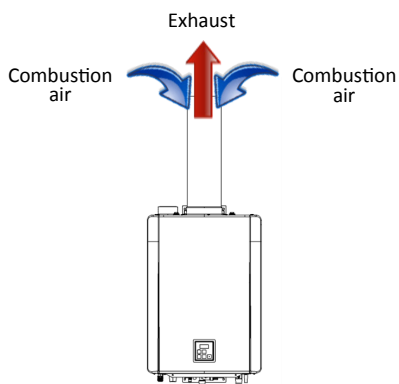
For complete venting options and installation instructions, refer to the “Rinnai Tankless Water Heater Installation and Operation Manual.” Venting components are packaged separately from the pre-assembled rack for field assembly of the vent system by the contractor.

The following vent options are available:

- Direct Vent with Concentric Pipe
- Direct Vent with Twin Pipe
- Common Vent

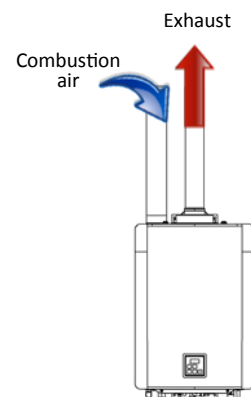
Direct Vent (Concentric Pipe)

Combustion air and exhaust vent directly through a single concentric connection. Hot exhaust exits through the interior tube, while combustion air enters through the outer layer.



Direct Vent (Twin Pipe)

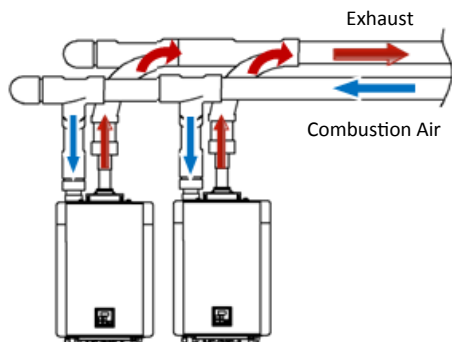
Combustion air and exhaust vent directly through separate penetrations.



Common Vent (Indoor Units Only. Direct Vent and Non-Direct/Room Air Vent)

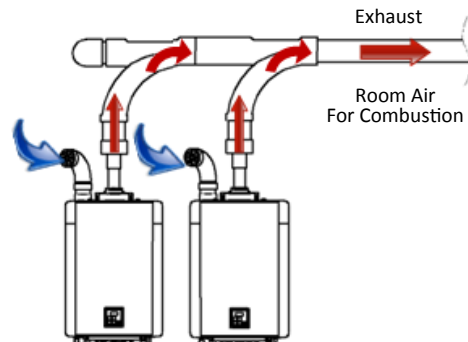
Direct Vent

Multiple water heaters sharing a combustion air header and a separate exhaust header that vents directly through separate penetrations to the outside.



Non-Direct (Room Air) Vent

Multiple water heaters using room air for combustion while sharing an exhaust header that vents directly to the outside.



Vent Options

The following table lists the vent options for the CX and CXP Series tankless water heaters.

Vent Options for CX and CXP Series Tankless Water Heaters

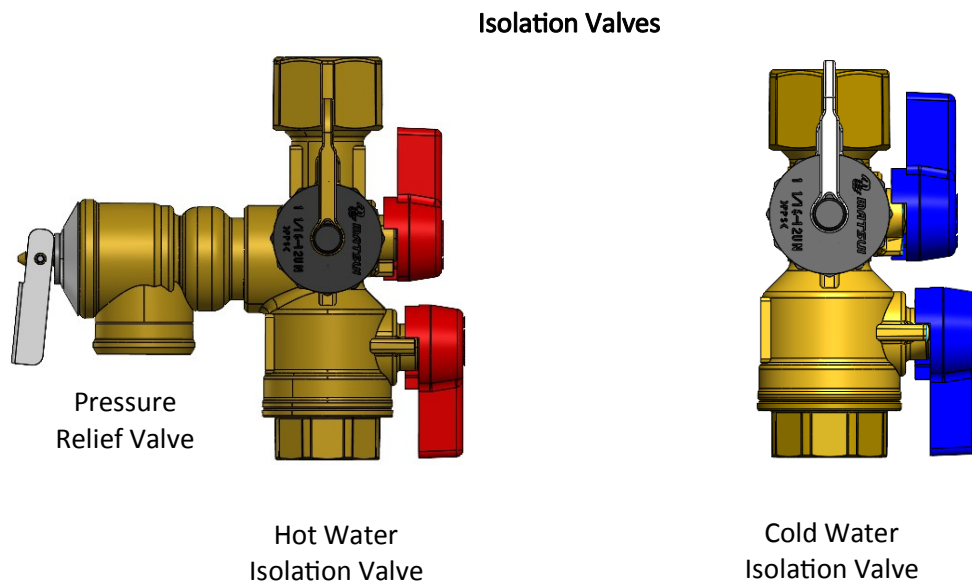
Vent Options	Vent Material		Diameter		Max. Units	Maximum Vent Length
	Exhaust	Intake	Header	Vent		
Common Vent	Polypropylene or Schedule 40 PVC/CPVC	Polypropylene or Schedule 40 PVC/CPVC	3 in.		2	65 FT
			4 in.		4	1-3 Units: 150 FT 4 Units: 65 FT
			4 in.	6 in.	7	1-6 Units: 150 FT 7 Units: 70 FT
			6 in.		8	150 FT
Concentric Pipe	Polypropylene	Schedule 40 PVC	[Shaded Area]		5 in.	150 FT
					4 in.	75 FT
Twin Pipe	Polypropylene ³ or Schedule 40 PVC/CPVC	Schedule 40 PVC/CPVC	[Shaded Area]		3 in.	150 FT
					2 in.	75 FT

³Twin Pipe Polypropylene venting is provided by Centrotherm through their own distribution network.

8. Plumbing

Pressure Relief Valve Piping

Each Rinnai Tankless Water Heater on the rack system comes installed with isolation valves and a pressure relief valve. Refer to the “Rinnai Tankless Water Heater Installation and Operation Manual” for information on piping the isolation valves and pressure relief valve.



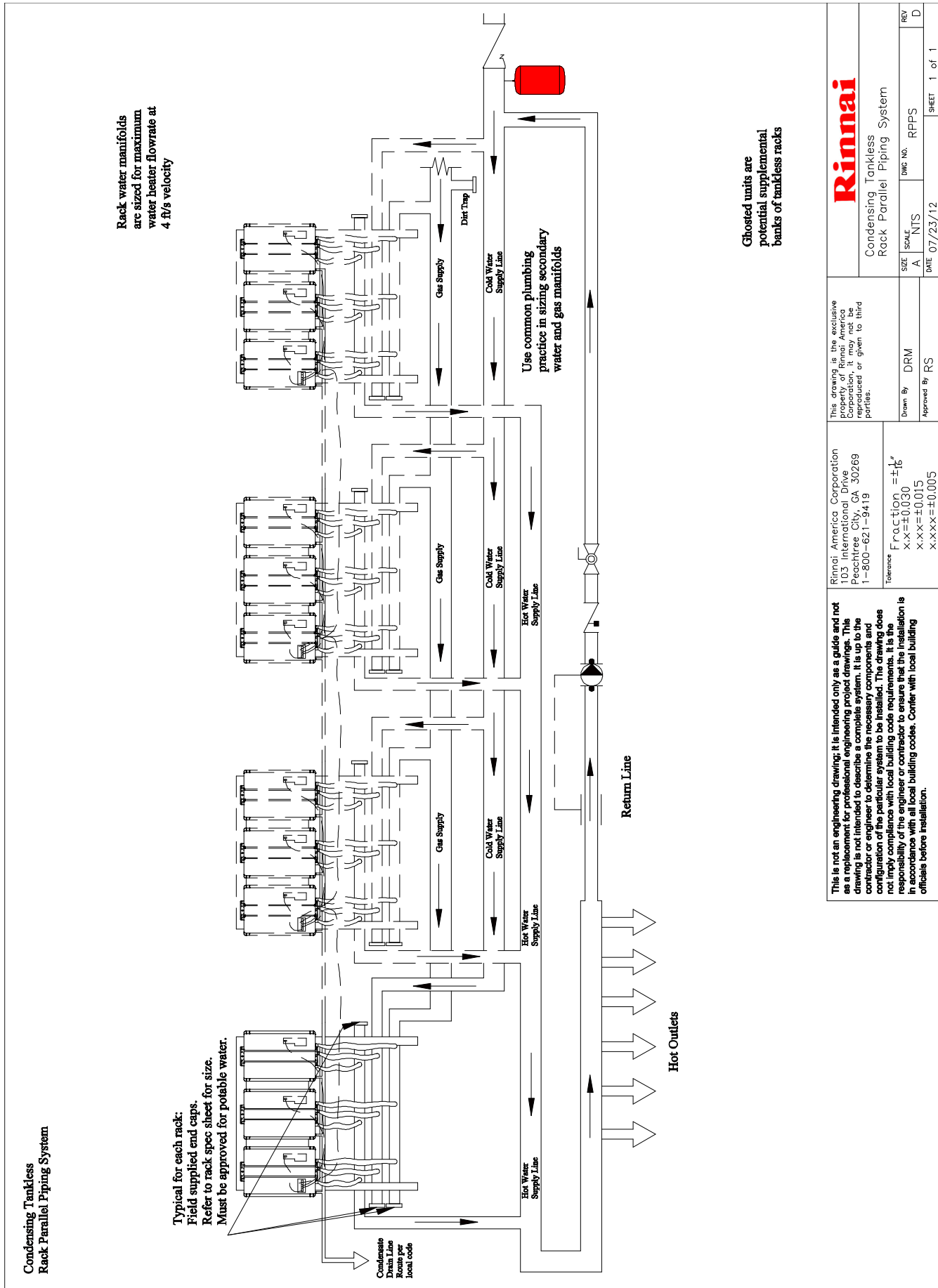
Piping for Multiple Racks

Multiple rack systems should be installed in parallel using a secondary manifold from the building’s cold and hot water supply. Reference the drawing on the following page for guidance on plumbing multiple racks in a parallel piping system.

A low pressure gas regulator must be installed prior to the rack system. Note the maximum cumulative input for the system when sizing the gas regulator.

Use common plumbing practice and reference all applicable codes when sizing the secondary manifolds and gas regulator.

Tankless Rack System Parallel Piping Diagram



<p>This is not an engineering drawing; it is intended only as a guide and not as a replacement for professional engineering project drawings. This drawing is not intended to describe a complete system. It is up to the contractor or engineer to determine the necessary components and configuration of the particular system to be installed. This drawing does not imply compliance with local building code requirements. It is the responsibility of the engineer or contractor to ensure that the installation is in accordance with all local building codes. Confer with local building officials before installation.</p>	<p>Rinnai America Corporation 103 International Palo Alto, CA 94304 1-800-621-9419</p>	<p>This drawing is the exclusive property of Rinnai America Corporation, it may not be reproduced or given to third parties.</p>
	<p>Tolerance Fraction = $\pm \frac{1}{16}$" X.X = ± 0.030 X.XX = ± 0.015 X.XXX = ± 0.005</p>	<p>Drawn By: DRM Approved By: RS</p>
<p>Rinnai</p> <p>Condensing Tankless Rack Parallel Piping System</p>		<p>SIZE: A SCALE: NTS DATE: 07/23/12</p>
<p>DMG NO. RPPS</p>		<p>REV: D SHEET: 1 of 1</p>

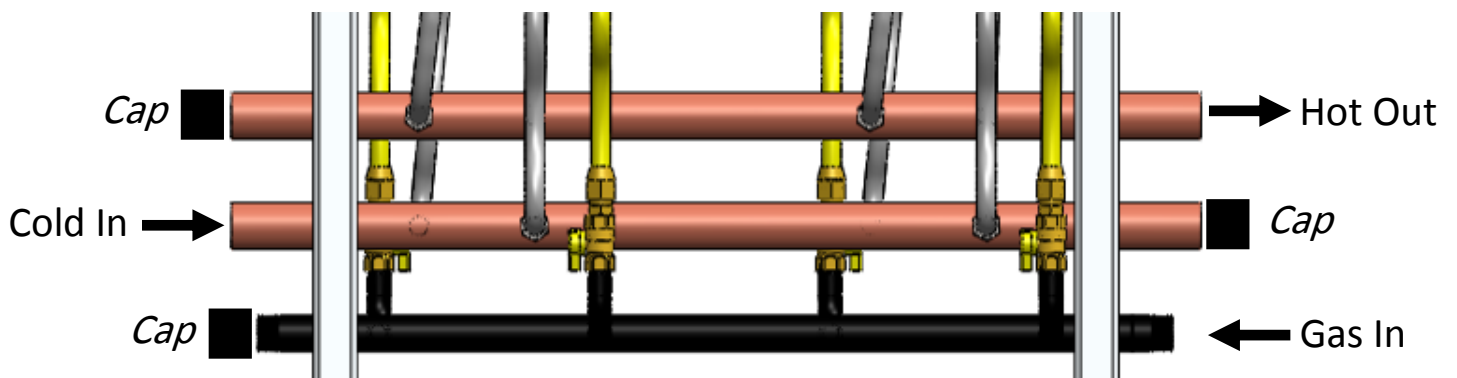
Piping End Caps / Connections

End caps are field-supplied and must be the following materials:

- Cold water cap - Brass or Copper
- Hot water cap - Brass or Copper
- Gas cap - Black Iron

When flow direction and gas supply side are determined, the other (opposite) side of the manifold must be capped. See the example below.

Leak check the capped ends of the manifolds.



Condensate Drain

Each Rinnai Tankless Water Heater has a condensate drain outlet on the bottom of the unit. A drain line must be connected to each water heater.

Free-standing rack systems with 3 or more units will include a prefabricated condensate manifold. For all other rack systems, a condensate drain manifold must be field-fabricated (not shown in diagram).

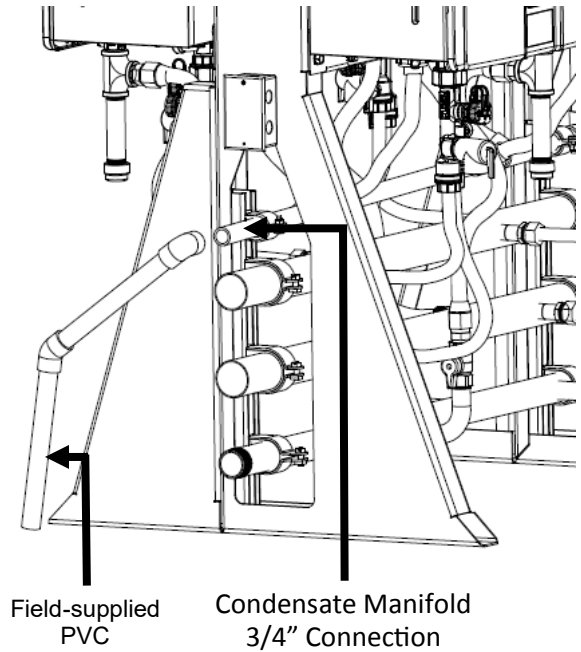
Condensate piping must be CPVC or PVC material and must not be smaller than the drain connection on the appliance.

Components of the condensate drainage shall be CPVC or PVC material. All components must be selected for the pressure and temperature rating of the installation.

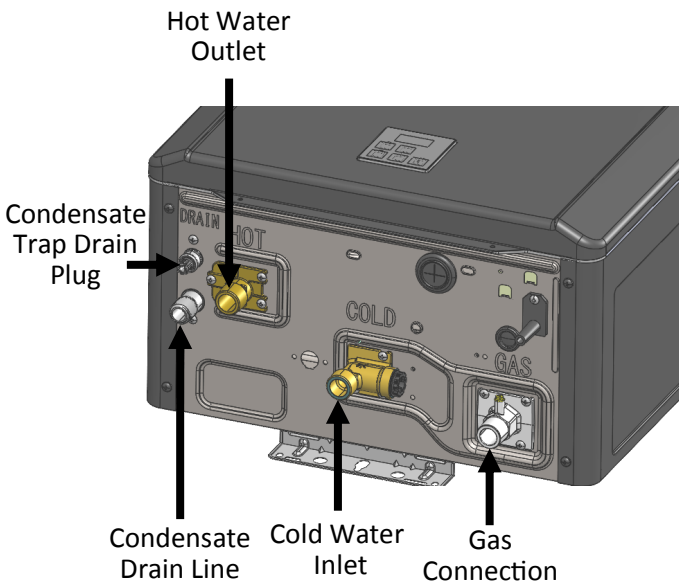
Where the drain pipes from more than one unit are manifolded together for condensate drainage, the pipe or tubing shall be sized in accordance with an approved method as dictated by local codes.

Condensate must be disposed of according to local codes.

Condensate drain must be sloped downward from the rack system. Condensate must be disposed of per local codes.



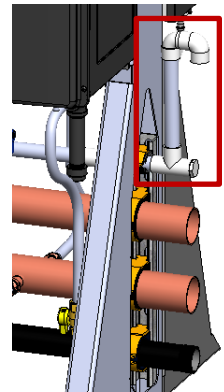
Piping Diagram for Basic Installation



1/2 in. NPT condensate drain pipe (along its entire length) must be at least the same diameter as the drain line.

NOTICE

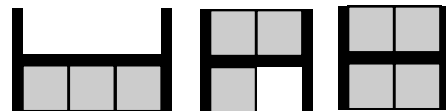
The telescoping fitting on the capped side of the condensate manifold is for air relief. **DO NOT** plug the opening.



Condensate Manifold

Condensate manifolds are installed above the water manifolds of the following racks for single point condensate connection. Models available with condensate manifolds include:

TRS03ILCX TRS03CX TRS04CX



TRS05CX

TRS06CX



9. Gas Supply

WARNING

- A licensed professional must install the gas supply.
- Turn off 120V power supply.
- Turn off the gas.
- Gas is flammable. Do not smoke or provide other ignition sources while working with gas.
- Do not turn on the water heater or gas until all fumes are gone.

Instructions

To connect the gas supply, follow the instructions below:

- 1** Check the type of gas and gas supply pressure before connecting the water heaters. If the water heaters are not of the gas type that the building is supplied with, **DO NOT** connect the water heaters. Contact the dealer for the proper water heaters to match the gas type.
- 2** Check the gas supply pressure immediately upstream at a location provided by the gas company. Supplied gas pressure must be within the limits shown in the **Specifications** section with all gas appliances operating.
- 3** Before placing the appliance in operation, all joints, including the heaters, must be checked for gas tightness by means of soap, gas leak detector solution, or an equivalent nonflammable solution, as applicable. Since some leak test solutions, including soap and water, may cause corrosion or stress cracking, the piping shall be rinsed with water after testing, unless it has been determined that the leak test solution is non-corrosive.
- 4** Any compound used on the threaded joint of the gas piping shall be a type that resists the action of liquefied petroleum gas (Propane/LPG).
- 5** The gas supply line shall be gas tight, sized, and installed as to provide a supply of gas sufficient to meet the maximum demand of the heaters and all other gas consuming appliances at the location without loss of pressure.
- 6** Perform a leak and pressure test prior to operating the water heaters. If a leak is detected, do not operate the water heaters until the leak is repaired.

10. Power Supply

WARNING

- Do not use an extension cord or adapter plug with this appliance.
- The water heater must be electrically grounded in accordance with local codes and ordinances or, in the absence of local codes, in accordance with the National Electrical Code, ANSI/ NFPA No. 70.
- Water heaters are equipped with a three-prong (grounding) plug for your protection against shock hazard and should be plugged directly into a properly grounded three-prong receptacle. Do not cut or remove the grounding terminal from this plug.

When connecting the power supply, follow these guidelines:

- Do not rely on the gas or water piping to ground the water heater. Ground locations are provided inside the water heater.
- The water heater requires 120 VAC, 60 Hz power from a properly grounded circuit.
- If using the 6.5 ft (2.0 m) power cord supplied with the water heater, plug it into a standard 3 prong 120 VAC, 60 Hz properly grounded wall outlet. The supplied power cord is outdoor rated and can be used outdoor.
- For outdoor installation, a field-supplied disconnect switch may be installed for the incoming 120 VAC power. The switch should be a type that is suitable for outdoor use. Check the National Electrical Code, ANSI/NFPA 70 and your local codes for a proper switch type to use in your area. Power connections must be protected from the weather.
- The wiring diagram is located on the inside of the water heater front cover.

Post-Power Supply Connection Checklist

- Confirm that the electricity is supplied from 120 VAC, 60 Hz power source and is in a properly grounded circuit.
- Confirm that an extension cord or an adapter plug has **NOT** been used with the water heater.

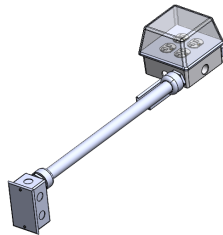
Pre-Wired Electrical Assembly

Electrical Assemblies are installed on the middle rack frame of the following indoor racks for single point electrical connection.

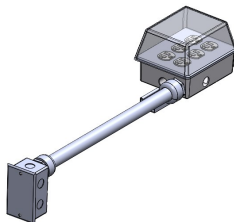
Refer to the **Specifications** sections in this manual for electrical requirements.

Interior Models Available with Electrical Assemblies

4 Unit Electrical Assembly with (2) 20 A, 125 V, 2-Pole, 3 Wire Grounding Receptacles



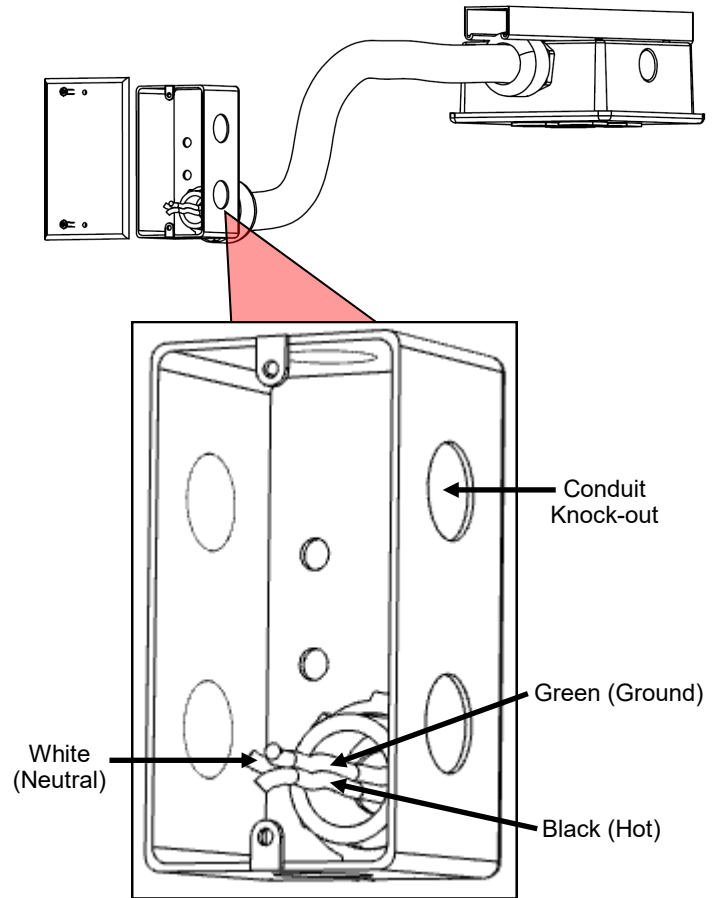
6-Unit Electrical Assembly with (3) 20 A, 125 V, 2-Pole, 3 Wire Grounding Receptacles



Instructions

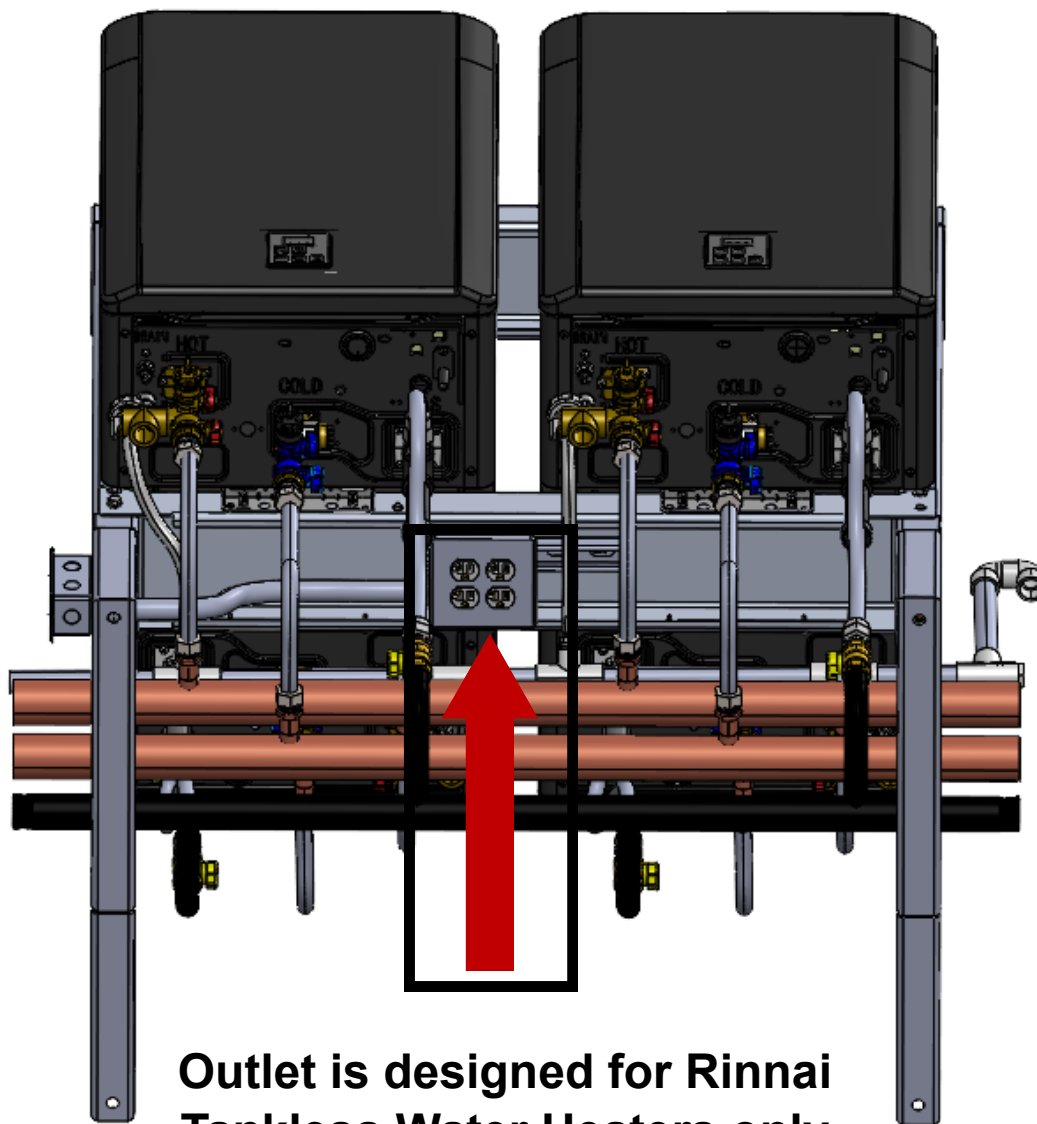


Shut off building supply power prior to connecting to TRS electrical assembly. Failure to do so may result in property damage, bodily harm, or death.



1. Locate the gang box on the side of the TRS frame.
2. Remove the 2 screws securing the front panel to the gang box.
3. Remove the front panel.
4. Run building-supplied electrical wiring and conduit to the gang box.
5. Connect building wiring to the 3 12AWG, THHN wires, Hot (Black), Neutral (White), and Ground (Green).
6. Reinstall the front panel to the gang box using 2 screws.
7. When the building electrical power supply has been wired to the rack system, plug the indoor units into the outlet located under the center rack frame as shown on the next page.

IMPORTANT: The outlet is designed for use with Rinnai Tankless Water Heaters only. Do not insert power cords belonging to other appliances or electrical sources into the outlet.



Outlet is designed for Rinnai Tankless Water Heaters only

⚠ NOTICE ⚡

DO NOT connect the tankless water heaters to the outlet located under the center rack prior to connecting building power supply to the rack electrical gang box. Doing so may cause damage to the PC Boards of the tankless water heaters.

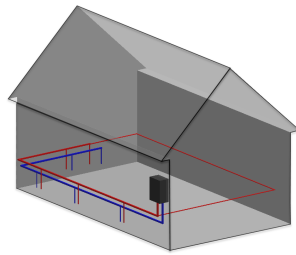
11. Configuring TRW02CXP and TRW03CXP Rack Models

This Section is Applicable for TRW02CXP and TRW03CXP Rack Models Only

TRW02CXP and TRW03CXP rack models are designed for the CXP199 tankless water heater, which has Smart-Circ™ Recirculation. Smart-Circ™ Recirculation includes a built-in recirculation pump and two recirculation modes:

DEDICATED MODE

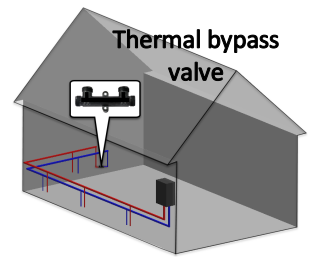
(Factory Default) Home/business includes a dedicated circulation return line in the plumbing system.



See the following section for Dedicated Mode instructions: **Configure TRW02CXP and TRW03CXP Racks For Dedicated Mode (Dedicated Recirculation Return Line)**

CROSSOVER MODE

Home/business does not include a dedicated circulation return line. Requires installation of a thermal bypass valve (NOT included with purchase) at the furthest fixture in the plumbing system.



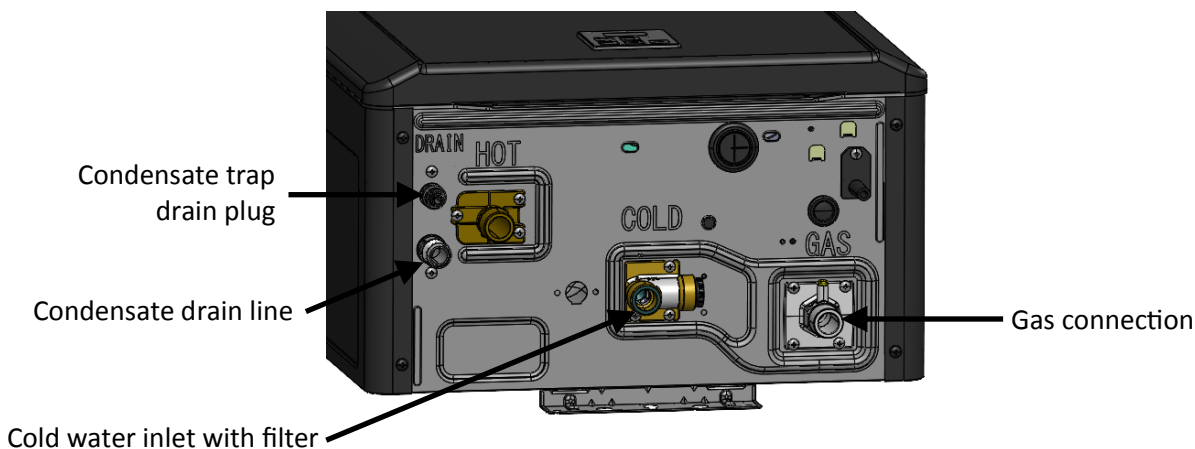
See the following section for Crossover Mode instructions: **Configure TRW02CXP and TRW03CXP Racks For Crossover Mode (Thermal Bypass Valve)**

General Guidelines

- For the licensed installer / professional.
- Rinnai strongly recommends installing insulation to the hot water and dedicated return lines to decrease the amount of heat loss.

- ❌ DO NOT install in combination with hydronic heating applications.
- ❌ DO NOT install the MC-195T-US Timer/Controller and Control-R™ Wi-Fi Module together as they are not compatible accessories.

Connection Diagram



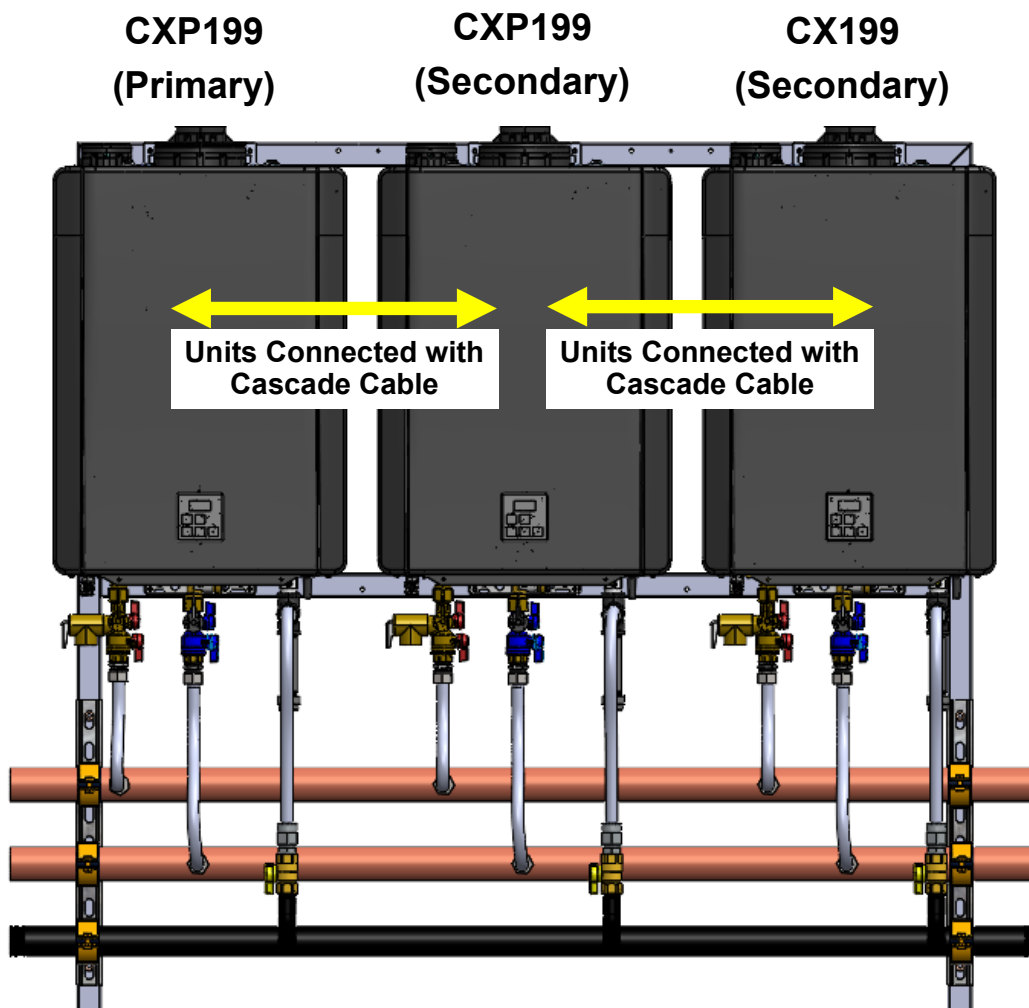
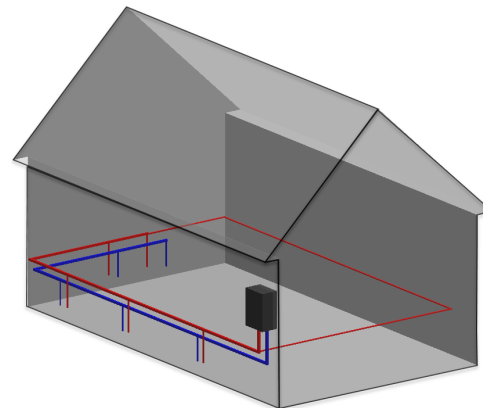
Configure TRW02CXP and TRW03CXP Racks for Dedicated Mode (Dedicated Recirculation Return Line)

IMPORTANT: This section is only for TRW02CXP and TRW03CXP rack models utilizing a dedicated recirculation return line in the plumbing system.

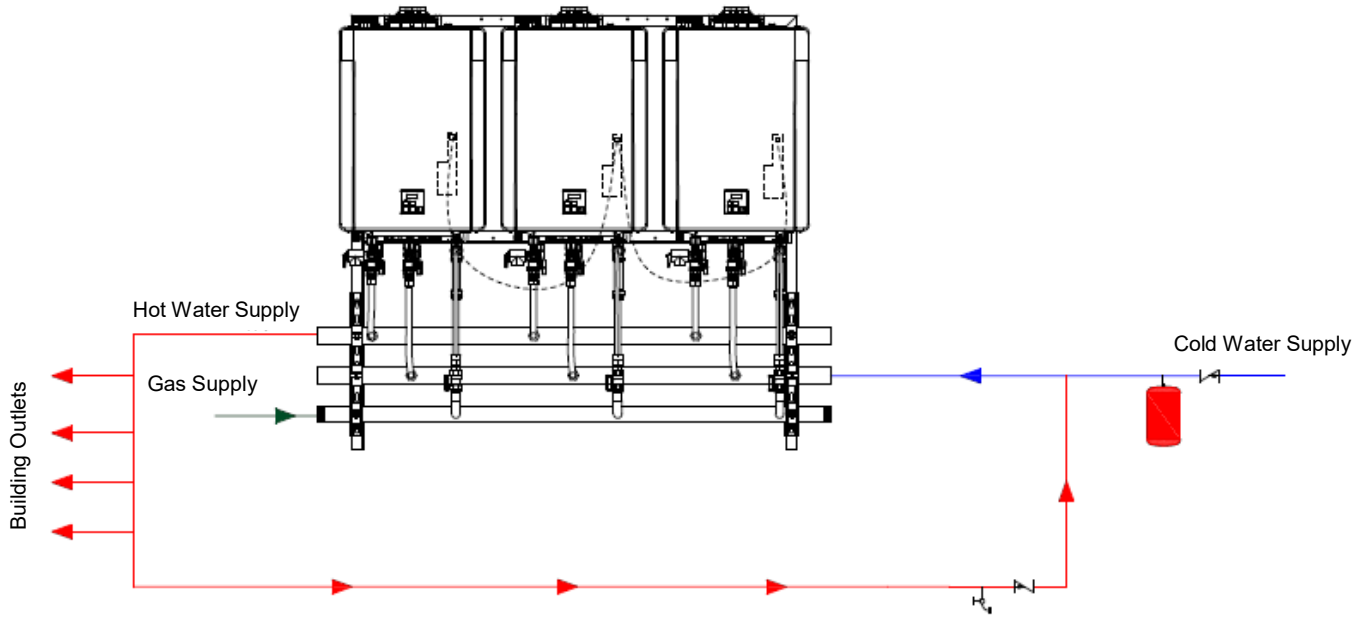
For the TRW02CXP model, use an EZConnect cable to connect the primary unit to the secondary unit.

Using an EZConnect cable, connect the primary unit (CXP199) to a secondary unit (CXP199).

For the TRW03CXP model with qty 2 CXP199 and qty 1 CX199, connect the three units together using the cascade cables.



Plumbing Diagram (Dedicated Mode)



Parameter Settings (Dedicated Mode)

Refer to the **Parameter Setting** section of the “Rinnai Tankless Water Heater Installation and Operation Manual” for instructions on accessing and changing parameter settings.

SETTING #	SETTING DESCRIPTION	SELECTION			
		a	b	c	d
04	Recirculation Settings	No Recirculation	Recirculation		
			Dedicated Mode	Crossover Mode	
05	Recirculation Modes	Economy	Comfort	Commercial	

04 Recirculation Settings

Dedicated Mode: Adjust parameter setting to 04 b for dedicated recirculation applications. Maximum recirculation loop length of 400 ft (122 m) with 3/4 in. pipe or 100 ft (30 m) with 1/2 in. pipe.

Maximum Pipe Length*		
Maximum pipe length includes the hot water supply line and dedicated return line.		
Pipe Diameter	3/4 in.	1/2 in.
Total	400 ft (122 m)	100 ft (30 m)

*Take equivalent elbow lengths into consideration when calculating pipe length.

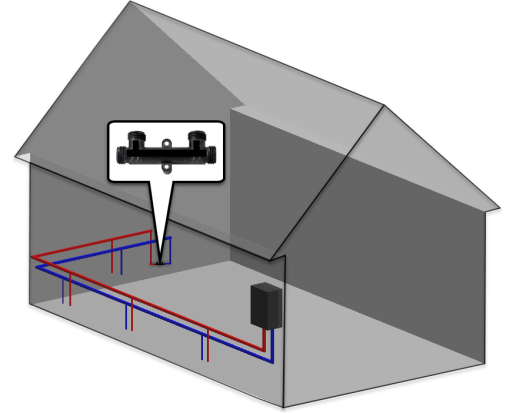
05 Recirculation Modes

- **Economy (Factory Default):** Adjust parameter setting to 05 a for Economy mode. This mode cycles the pump less often, using less energy to maintain the circulation loop temperature.
- **Comfort:** Adjust parameter setting to 05 b for Comfort mode. This mode cycles the pump more frequently, ensuring the loop temperature remains higher (but also uses more energy).
- **Commercial:** Adjust parameter setting to 05 c for Commercial mode. This mode cycles the pump on and off continuously, which may result in excessive machine wear and energy consumption.

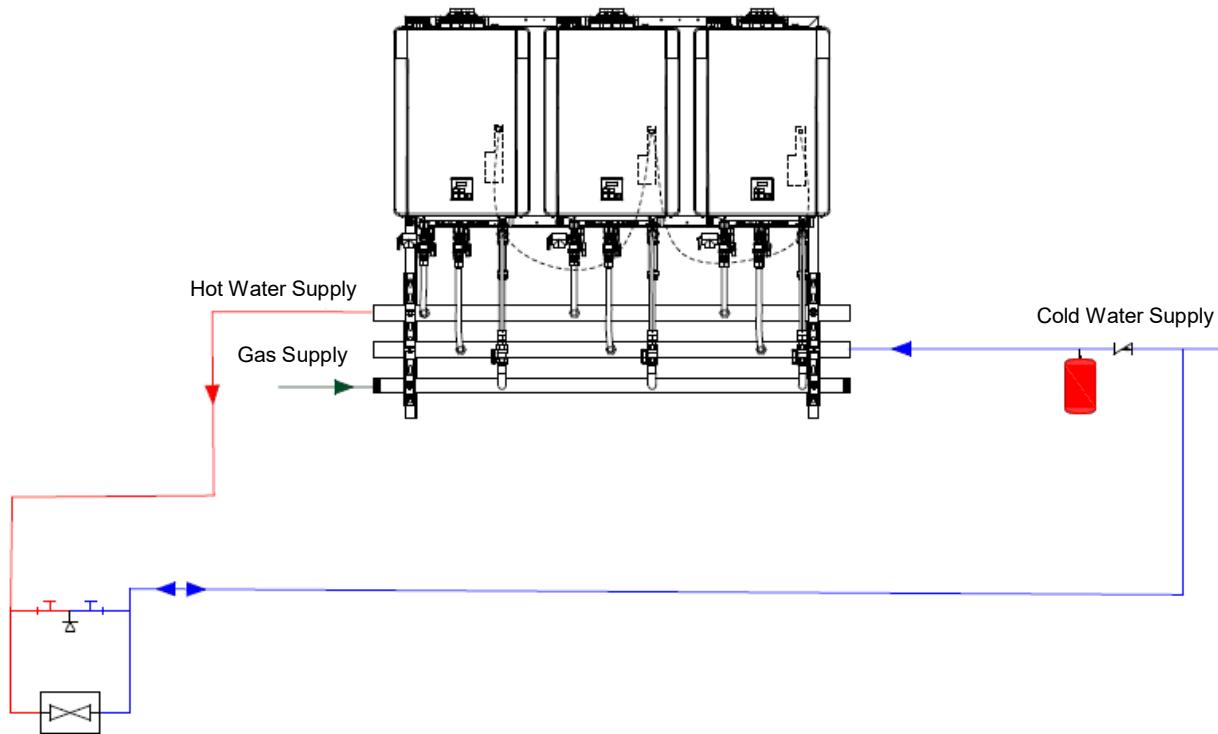
Configure TRW02CXP and TRW03CXP Racks for Crossover Mode (Thermal Bypass Valve)

IMPORTANT: This section is only for TRW02CXP and TRW03CXP rack models using a thermal bypass valve for recirculation in the plumbing system.

- 1 Configure the parameter settings for Crossover Mode on each water heater. Refer to the “Rinnai Tankless Water Heater Installation and Operation Manual” for detailed instructions.



Plumbing Diagram (Crossover Mode)



Parameter Settings (Crossover Mode)

Refer to the **Parameter Setting** section of the “Rinnai Tankless Water Heater Installation and Operation Manual” for instructions on accessing and changing parameter settings.

SETTING #	SETTING DESCRIPTION	SELECTION			
		a	b	c	d
04	Recirculation Settings	No Recirculation	Recirculation		
			Dedicated Mode	Crossover Mode	
05	Recirculation Modes	Economy	Comfort	Commercial	

04 Recirculation Settings

Crossover Mode: Adjust parameter setting to 04c for crossover recirculation applications. Maximum pipe length of 400 ft (122 m) with 3/4 in. pipe or 100 ft (30 m) with 1/2 in. pipe.

Maximum Pipe Length*		
Pipe Diameter	3/4 in.	1/2 in.
Total	400 ft. (122m)	100 ft. (30m)

*Take equivalent elbow lengths into consideration when calculating pipe length.

05 Recirculation Modes

- **Economy (Factory Default):** Adjust parameter setting to 05a for Economy mode. This mode cycles the pump less often, using less energy to maintain the circulation loop temperature.
- **Comfort:** Adjust parameter setting to 05b for Comfort mode. This mode cycles the pump more frequently, ensuring the loop temperature remains higher (but also uses more energy).
- **Commercial:** Adjust parameter setting to 05c for Comfort mode. This mode cycles the pump on and off continuously, which may result in excessive machine wear and energy consumption.

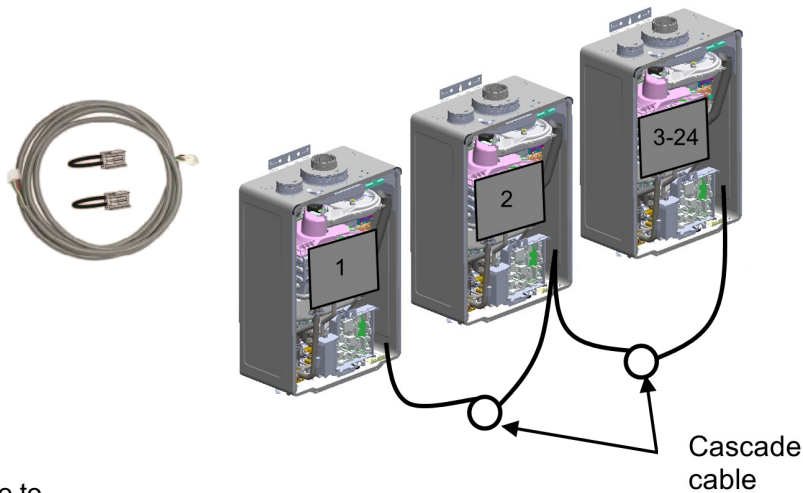
12. Connect Water Heaters

With use of cascade cable(s) up to 24 water heaters can be electronically connected. This connection will rotate water heater operation order to ensure equal usage among the entire system and enables all water heaters connected to modulate operation and function as one hot water source.

NOTE: For proper operation, do not combine different models with cascade communication.

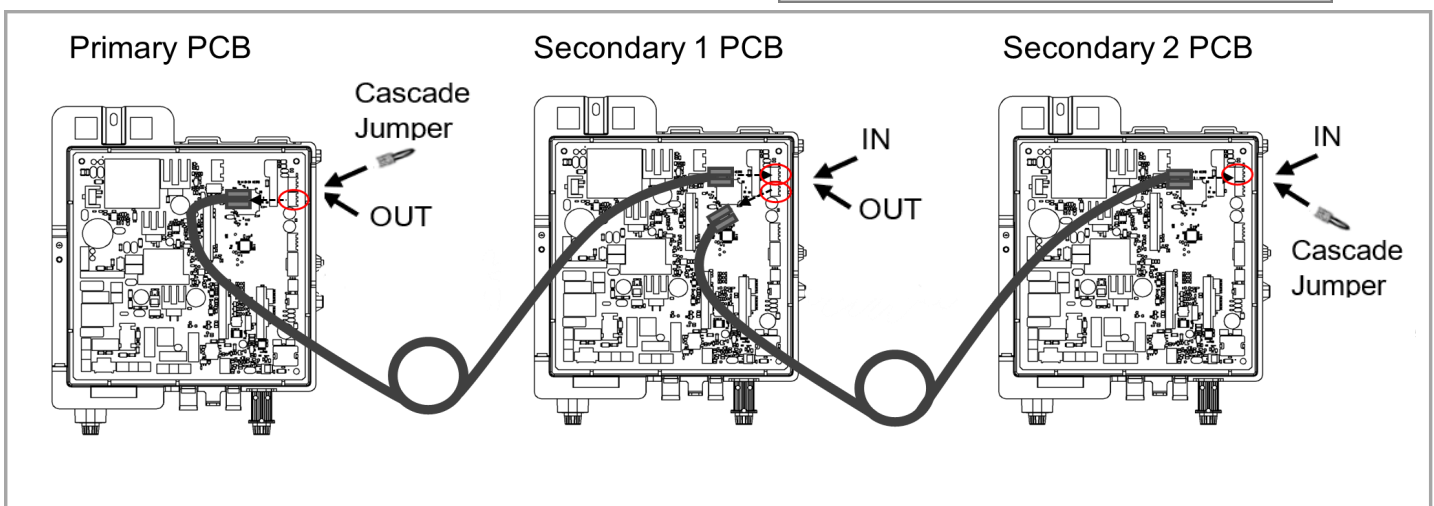
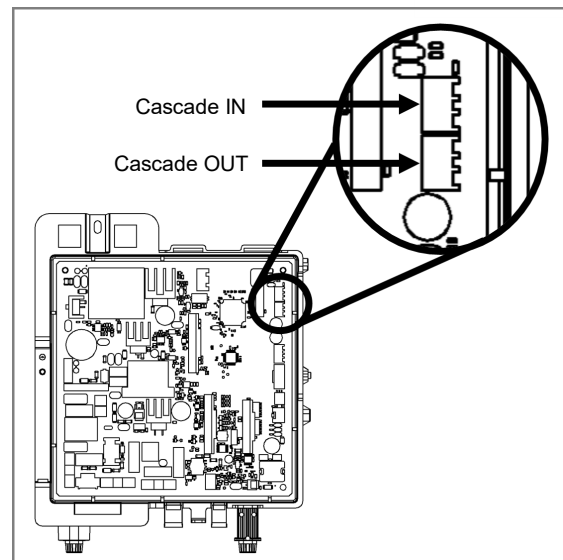
Cascade Cable Required:

- Cable Length: 26 ft. (8 m) OR
- Cable Length: 10 ft. (3 m)
- One cable required for each water heater.
- Includes 1 cable and 2 cascade jumpers.



Cascade Cable Assembly

1. Connect one end of the Cascade Cable to the “Cascade OUT” accessory port on the PCB.
2. Connect the other end of the cascade cable to the “Cascade IN” accessory port on the PCB of the next water heater.
3. Repeat steps 1 and 2 for each subsequent water heater in the system.
4. Connect the “Cascade Jumper” (Included with the cascade cable) to the open accessory ports.
5. Proceed to “Programing Cascade Communication” on the following page.



Programming Cascade Communication

Parameter Settings (Cascade Communication)

Refer to the **Parameter Setting** section of the “Rinnai Tankless Water Heater Installation and Operation Manual” for instructions on accessing and changing parameter settings.

SETTING #	SETTING DESCRIPTION	SELECTION					
		a	b	c	d	e	f
08	Cascade	Secondary (1-23)	Primary				
09	Units in Standby (Cascade)	1	2	3	4	5	6

08 Cascade:

Primary: Select the water heater intended to be the Primary water heater for cascade communication. Set the parameter setting for this water heater to “Primary” (08b).

NOTE: Controller will display the set temperature for the system.

Secondary: Factory Default setting for each water heater is set to “Secondary”. Parameter adjustment is only needed on the water heater identified as “Primary”.

NOTE: Controller will display “- - -”.

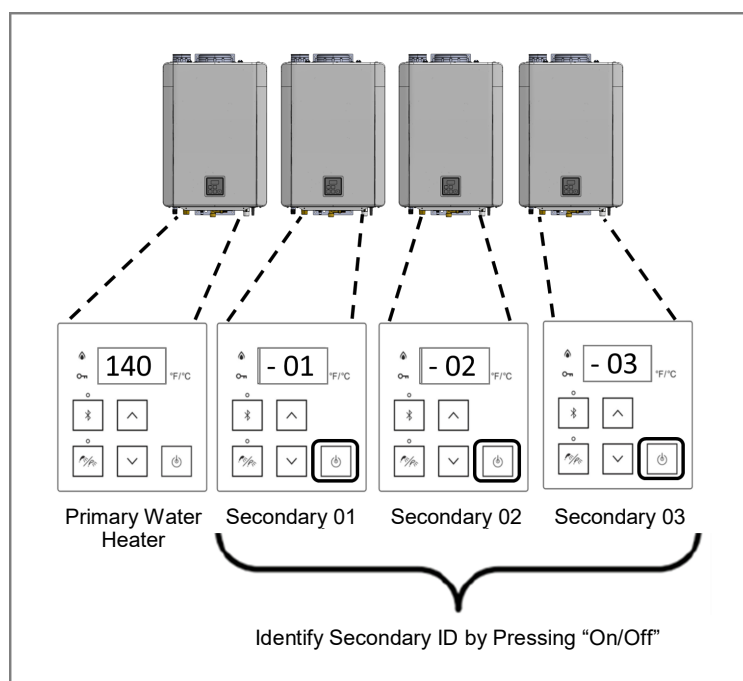
09 Units in Standby:

Adjust the parameter setting of the primary unit to set the number of water heaters in standby. Standby units will maintain operation with the water flow control valve in the open position. The remaining water heaters will maintain the water flow control valve in the closed position.

Setting Secondary ID

After identifying the “Primary” water heater in the parameter settings, set the Secondary ID for all remaining water heater in the system by pressing the “On/Off” button on the controller.

When ID setting is successful, the controller display will change from “- - -” to the newly set ID number.



13. Installation Checklist

Complete the following checklist when installation is complete. You should be able to answer YES to each question. If you answer NO to any question, installation is not complete. Refer to the applicable section in the “Rinnai Tankless Water Heater Installation and Operation Manual” for additional information.

Reference the “Rinnai Tankless Water Heater Installation and Operation Manual” For Additional Information on the Items Below

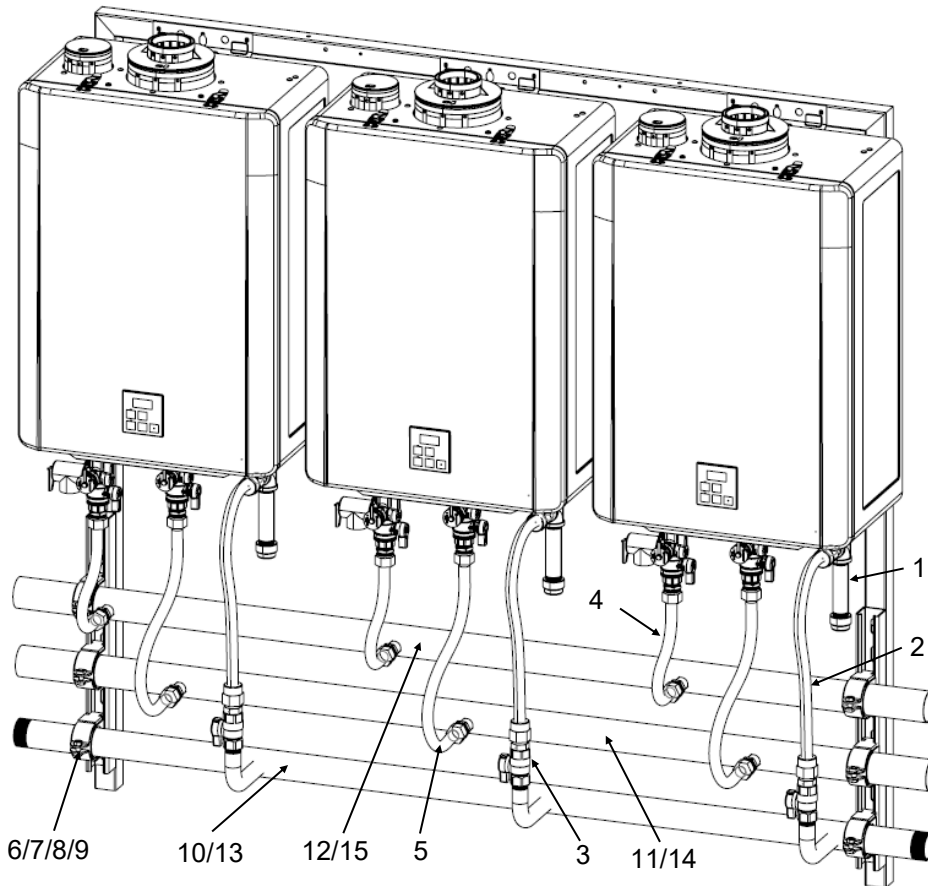
INSTALLATION LOCATION	YES	NO
Have you verified the units, vents and air intakes meet the clearance requirements?	<input type="checkbox"/>	<input type="checkbox"/>
COMBUSTION AIR & VENTING	YES	NO
Have all corrosive compounds been removed from around the combustion air inlet of the tankless water heaters?	<input type="checkbox"/>	<input type="checkbox"/>
Have you followed the combustion air requirements to provide sufficient combustion air for the tankless water heaters?	<input type="checkbox"/>	<input type="checkbox"/>
Are the correct venting products for the installed models being utilized?	<input type="checkbox"/>	<input type="checkbox"/>
Have you installed the vent screen(s) for PVC vent applications?	<input type="checkbox"/>	<input type="checkbox"/>
Have you verified the vent systems do not exceed maximum length?	<input type="checkbox"/>	<input type="checkbox"/>
PLUMBING	YES	NO
Have you ensured that a pressure relief valve is installed with a rating that exceeds the BTU input of the water heater models? Refer to the rating plate on the side of each water heater for BTU input.	<input type="checkbox"/>	<input type="checkbox"/>
Have the water lines been purged of all debris and the filter cleaned? Debris will damage the water heaters. Clean the inlet water filter by closing the cold and hot water inlet isolation (shut-off) valves. Put a bucket under the filter at the bottom of each water heater to catch any water that is contained inside the unit. Unscrew the water filter. Rinse the filter to remove any debris. Install the filter and open the isolation valves.	<input type="checkbox"/>	<input type="checkbox"/>
Have you verified the hot and cold water manifolds to each tankless water heater are not interchanged?	<input type="checkbox"/>	<input type="checkbox"/>
Does the water supply to the heaters have adequate pressure? Minimum water pressure is 50 psi. Rinnai recommends 60-80 psi for maximum performance. Is the water supply free of chemicals? Did you verify the water supply does not exceed total hardness that will damage the heat exchangers?	<input type="checkbox"/>	<input type="checkbox"/>
Have you verified that toxic chemicals were not introduced to the potable water?	<input type="checkbox"/>	<input type="checkbox"/>
Did you drain the tankless water heaters if not intended to be used immediately?	<input type="checkbox"/>	<input type="checkbox"/>
Have water quality issues (if any) been addressed?	<input type="checkbox"/>	<input type="checkbox"/>
Have you performed the leak and pressure test for the tankless water heaters and plumbing system?	<input type="checkbox"/>	<input type="checkbox"/>

Continued on next page

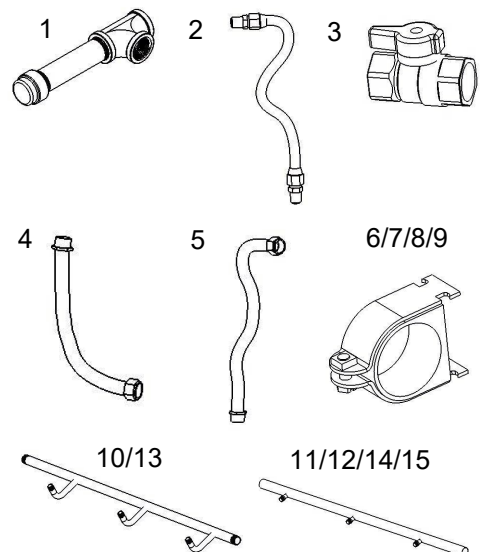
PRESSURE RELIEF VALVE (PRV)	YES	NO
Is the discharge from the PRV piped to the ground or into a drain system as per local codes?	<input type="checkbox"/>	<input type="checkbox"/>
Is the discharge line from the PRV pitched downward and does it terminate 6 in. (152 mm) above the drains?	<input type="checkbox"/>	<input type="checkbox"/>
Is the discharge end of the line plain (unthreaded) and a minimum of 3/4 in. diameter?	<input type="checkbox"/>	<input type="checkbox"/>
Is the discharge line material suitable for at least 180° F water?	<input type="checkbox"/>	<input type="checkbox"/>
Did you take measures to protect the PRV and PRV discharge line from freezing?	<input type="checkbox"/>	<input type="checkbox"/>
Have you verified the PRV is not plumbed with the condensate drain line?	<input type="checkbox"/>	<input type="checkbox"/>
Have you verified the PRV is not plugged and that reducing fittings, valves, or other restrictions are not installed in the relief line?	<input type="checkbox"/>	<input type="checkbox"/>
CONDENSATE DRAIN	YES	NO
If the condensate pump is installed, is it wired to deactivate the tankless water heaters in the event of failure?	<input type="checkbox"/>	<input type="checkbox"/>
Did you verify the condensate drain pipe is as short as possible and has a downward pitch toward the drain or condensate pump?	<input type="checkbox"/>	<input type="checkbox"/>
Is all condensate drained and disposed of as per local codes?	<input type="checkbox"/>	<input type="checkbox"/>
Did you use ONLY corrosion resistant materials for the condensate drain lines?	<input type="checkbox"/>	<input type="checkbox"/>
Did you verify the condensate drain pipe along its entire length is at least the same diameter as the drain line (1/2 in. NPT)?	<input type="checkbox"/>	<input type="checkbox"/>
Did you check to ensure the condensation drain lines are protected from freezing?	<input type="checkbox"/>	<input type="checkbox"/>
If a floor pump is not available or the drain is above the level of the condensate drain, did you install a condensate pump?	<input type="checkbox"/>	<input type="checkbox"/>
Have you verified the condensate drain line is not plumbed with the pressure relief valve?	<input type="checkbox"/>	<input type="checkbox"/>
Have you confirmed the condensate drain line is not connected with an air conditioning evaporator coil drain?	<input type="checkbox"/>	<input type="checkbox"/>
Have you verified an external condensate trap is not installed?	<input type="checkbox"/>	<input type="checkbox"/>
Have you confirmed the end of the condensate drain pipe is open to atmosphere?	<input type="checkbox"/>	<input type="checkbox"/>
GAS SUPPLY	YES	NO
Did you verify the gas system is appropriately sized?	<input type="checkbox"/>	<input type="checkbox"/>
Did you verify each water heater is rated for the gas type supplied?	<input type="checkbox"/>	<input type="checkbox"/>
Have you performed a gas line and connection leak test?	<input type="checkbox"/>	<input type="checkbox"/>
Is the inlet gas pressure within limits?	<input type="checkbox"/>	<input type="checkbox"/>
Did you purge the gas line of any debris before connecting the water heaters?	<input type="checkbox"/>	<input type="checkbox"/>

14. Appendices

TRW Replacement Parts

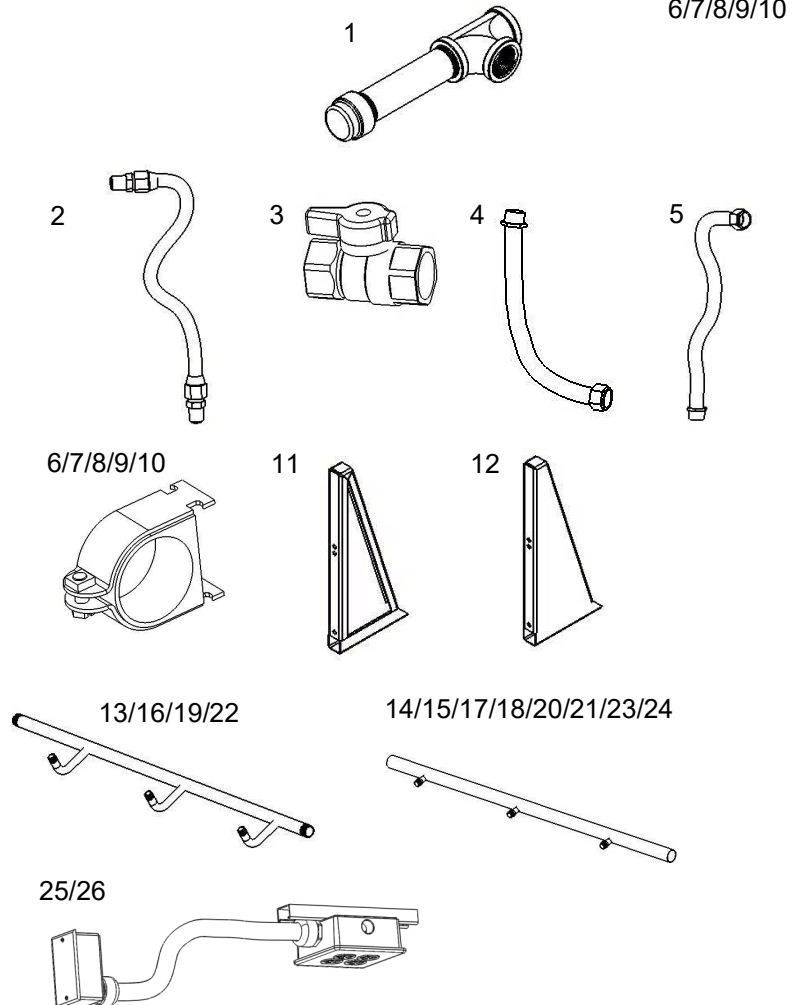
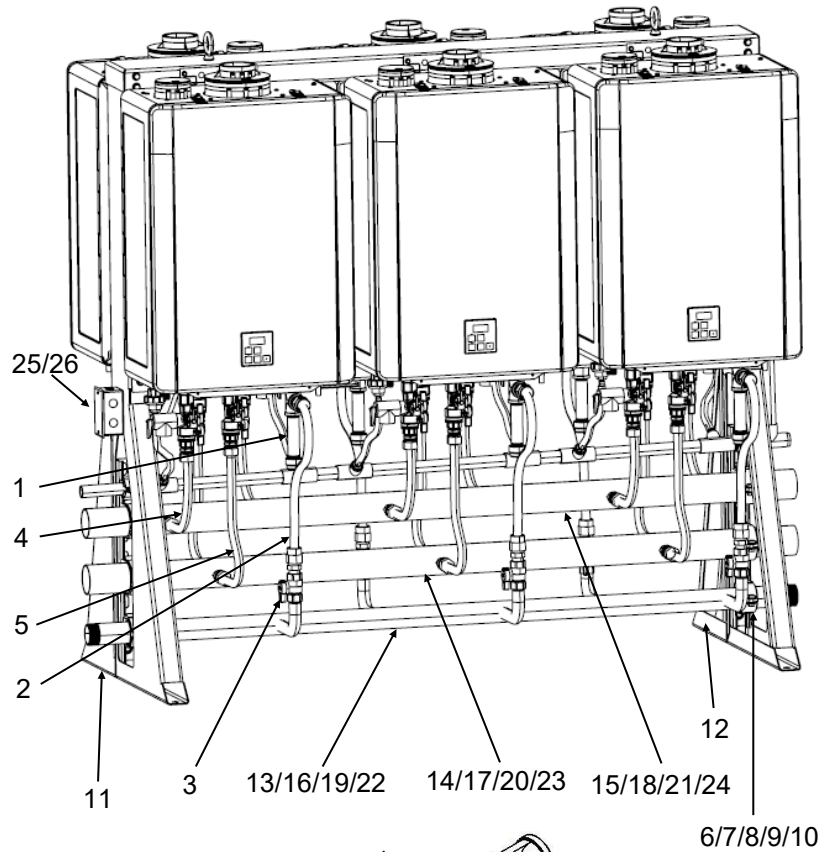


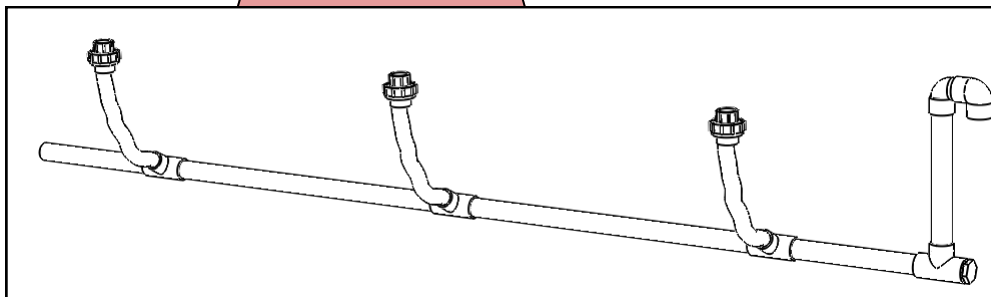
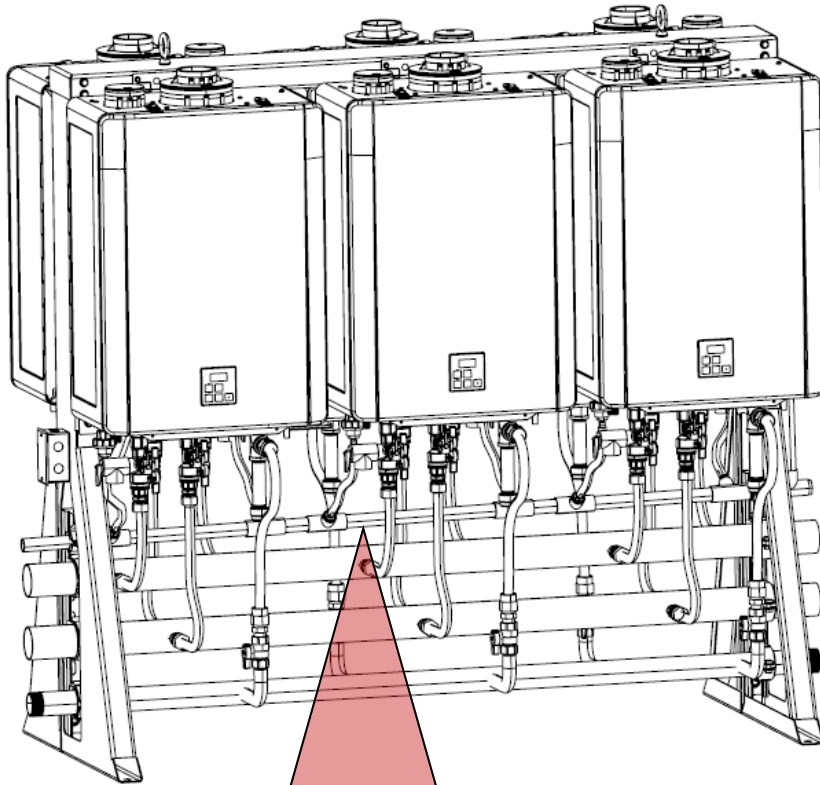
ALL TRW MODELS		
Ref.	Description	Part Number
1	Dirt Leg	106000092
2	Gas Flex Line Assembly	109000416
3	Gas Valve	106000102
4	Hot Water Flex Line	107000424
5	Cold Water Flex Line	107000425
7	Cush Clamp 2.125 ID	109000301
9	Cush Clamp 1.66 ID	109000398
TRW03		
10	Manifold, Gas - 3WM	106000140
11	Manifold, Water Cold - 3WM	107000361
12	Manifold, Water Hot - 3WM	107000362
TRW02		
13	Manifold, Gas - 2WM	106000139
14	Manifold, Water Cold - 2WM	107000359
15	Manifold, Water Hot - 2WM	107000360



TRS Replacement Parts

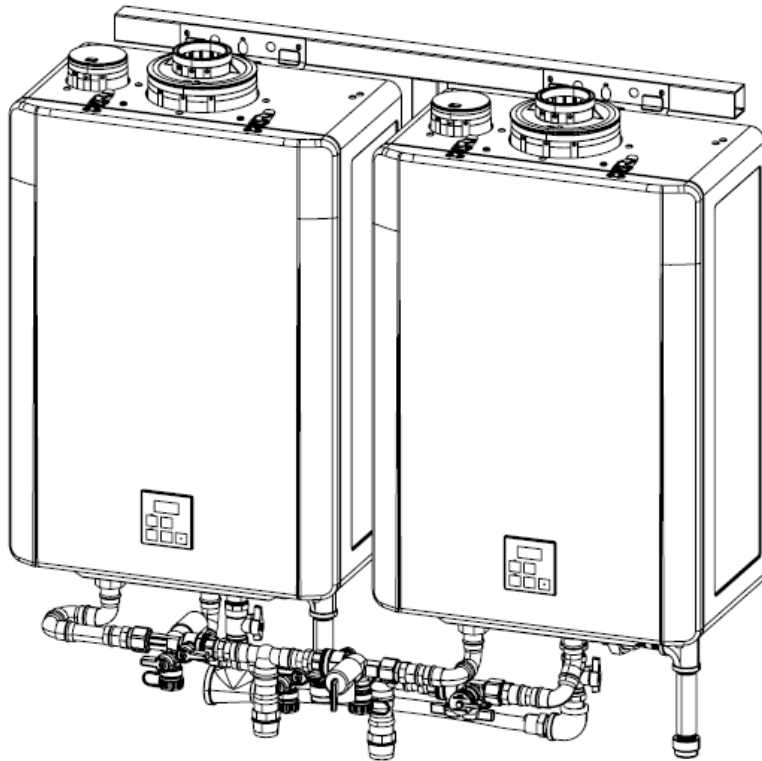
ALL TRS		
REF.	Description	Part Number
1	Dirt Leg	106000092
2	Gas Flex Line Assembly	109000416
3	Gas Valve	106000102
4	Hot Water Flex Line	107000424
5	Cold Water Flex Line	107000425
6	Cush Clamp 2.63 ID (TRS05/06 models)	109000394
7	Cush Clamp 2.125 ID (TRS02/03ILCX and TRS03/04CX models)	109000301
8	Cush Clamp 1.90 ID (TRS05/06CX models)	109000395
9	Cush Clamp 1.66 ID (TRS02/03ILCX and TRS03/04CX models)	109000398
10	Cush Clamp 1.05 ID (TRS03ILCX and TRS03/04/05/06CX models)	109000549
11	Frame, Rack Left Rear	109000384
12	Frame, Rack Right Rear	109000385
TRS05/TRS06		
13	Manifold, Gas - 6B2B	106000142
14	Manifold, Water Cold -	107000365
15	Manifold, Water Hot - 6B2B	107000366
TRS03/TRS04		
16	Manifold, Gas - 4B2B	106000141
17	Manifold, Water Cold -	107000363
18	Manifold, Water Hot - 4B2B	107000364
TRS03IL		
19	Manifold, Gas - 3WM	106000140
20	Manifold, Water Cold - 3WM	107000361
21	Manifold, Water Hot - 3WM	107000362
TRS02IL		
22	Manifold, Gas - 2WM	106000139
23	Manifold, Water Cold - 2WM	107000359
24	Manifold, Water Hot - 2WM	107000360
TRS03/TRS03IL/TRS04		
25	Electrical - 4 Connections	105002053
TRS05/TRS06		
26	Electrical - 6 Connections	105002054



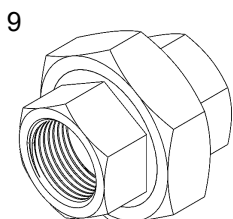
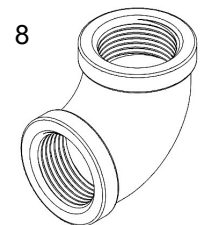
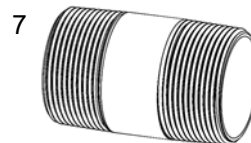
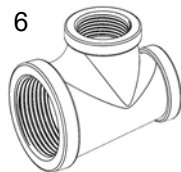
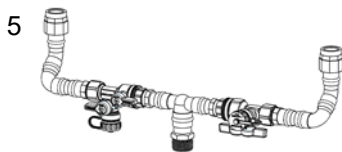
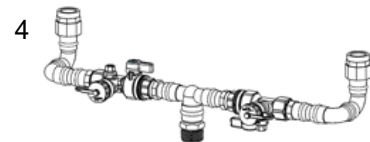
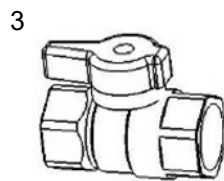
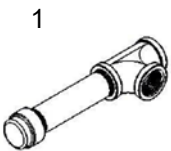


CONDENSATE MANIFOLD		
RACK	DESCRIPTION	PART NUMBER
TRS03IL	3 Connections - In-Line	107000393
TRS03CX	3 Connections - 3B2B	107000391
TRS04CX	4 Connections - 4B2B	107000392
TRS05CX	5 Connections - 5B2B	107000396
TRS06CX	6 Connections - 6B2B	107000397

TRX Replacement Parts



ALL TRX MODELS		
Ref.	Description	Part Number
1	Dirt Leg	106000092
2	Gas Flex Line Assembly	106000190
3	Gas Valve	106000102
4	Hot Water Manifold	104000305
5	Cold Water Manifold	104000306
6	Threaded Tee	106000159
7	Threaded Nipple	106000272
8	Threaded Elbow	106000158
9	Threaded Union	106000167



15. Limited Warranty

What is Covered?

The Rinnai Standard Limited Warranty covers any defects in materials or workmanship when the product is installed and operated according to Rinnai written installation instructions, subject to the terms within this Limited Warranty document. This Limited Warranty applies only to products that are installed correctly in the United States and Canada. Improper installation may void this Limited Warranty. It is recommended that a trained and qualified professional who has attended a Rinnai installation training class complete your installation. This Limited Warranty coverage, as set out in the table below, extends to the original purchaser and subsequent owners, but only while the product remains at the site of the original installation and terminates if the product is moved or reinstalled at a new location.

Item	Period of Coverage (from date of purchase)
Tankless Water Heaters	Refer to the Water Heater Installation and Operation Manual shipped with your system for complete warranty details on your Rinnai Tankless Water Heater.
Rack and Components	1 Year

What Will Rinnai Do?

Rinnai will repair or replace the covered product or any part or component that is defective in materials or workmanship as set forth in the above table. Rinnai will pay reasonable labor charges associated with the repair or replacement of any such part or component during the term of the labor warranty period. All repair parts must be genuine Rinnai parts. All repairs or replacements must be performed by a qualified professional who is properly trained to do the type of repair.

Replacement of the product may only be authorized by Rinnai at its sole discretion. Rinnai does not authorize any person or company to assume for it any obligation or liability in connection with the replacement of the product. If Rinnai determines that repair of a product is not possible, Rinnai may replace the product with a comparable product at Rinnai's sole discretion. The warranty claim for product parts and labor may be denied if a component or product returned to Rinnai is found to be free of defects in material or workmanship; damaged by improper installation, use or operation; or damaged during return shipping.

How To Obtain Service

For the name of a trained and qualified professional, please contact your place of purchase, visit the Rinnai website (www.rinnai.us), call Rinnai at 1-800-621-9419 or write to Rinnai at 103 International Drive, Peachtree City, Georgia 30269.

Proof of purchase is required to obtain warranty service. You may show proof of purchase with a dated sales receipt, or by registering within 30 days of purchasing the product. To register your Rinnai Tankless Water Heater, please visit www.rinnai.us. For those without internet access, please call 1-800-621-9419. Receipt of registration by Rinnai will constitute proof-of-purchase for this product. Registration of product installed in new home construction may be verified with a copy of the closing papers provided by the initial home buyer. However, registration is not necessary in order to validate this Limited Warranty.

What Is Not Covered?

This Limited Warranty does not cover any failures or malfunctions due to the following:

- Accident, abuse, or misuse
- Alteration of the product or any component part
- Misapplication of this product

- Improper installation (such as but not limited to)
 - Product being installed in a corrosive environment
 - Condensate damage
 - Improper venting
 - Incorrect gas type
 - Incorrect gas or water pressure
 - Absence of a drain pan under the appliance
- Improper maintenance (such as but not limited to scale build-up, freeze damage, or vent blockage)
- Incorrect sizing
- Any other cause not due to defects in materials or workmanship
- Problems or damage due to fires, flooding, electrical surges, freezing or any acts of God
- Any damage caused by poor water quality
- Operating the water heater with anything other than potable water at all times
- Force majeure

There is no warranty coverage on product installed in a closed loop application, commonly associated with space heating only applications.

The integrated controller on indoor models has a 1 year warranty on parts.

This Limited Warranty does not apply to any product whose serial number or manufacture date has been defaced.

This Limited Warranty does not cover any product used in an application that uses chemically treated water such as a pool or spa heater. This appliance is suitable for filling large or whirlpool bath tubs with potable water.

Limitation on Warranties

No one is authorized to make any other warranties on behalf of Rinnai America Corporation. Except as expressly provided herein, there are no other warranties, expressed or implied, including, but not limited to warranties of merchantability or fitness for a particular purpose, which extend beyond the description of the warranty herein.

Any implied warranties of merchantability and fitness arising under state law are limited in duration to the period of coverage provided by this Limited Warranty, unless the period provided by state law is less. Some states do not allow limitations on how long an implied Limited Warranty lasts, so the above limitation may not apply to you.

Rinnai shall not be liable for indirect, incidental, special, consequential or other similar damages that may arise, including lost profits, damage to person or property, loss of use, inconvenience, or liability arising from improper installation, service or use. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you.

This Limited Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

www.rinnai.us/warranty