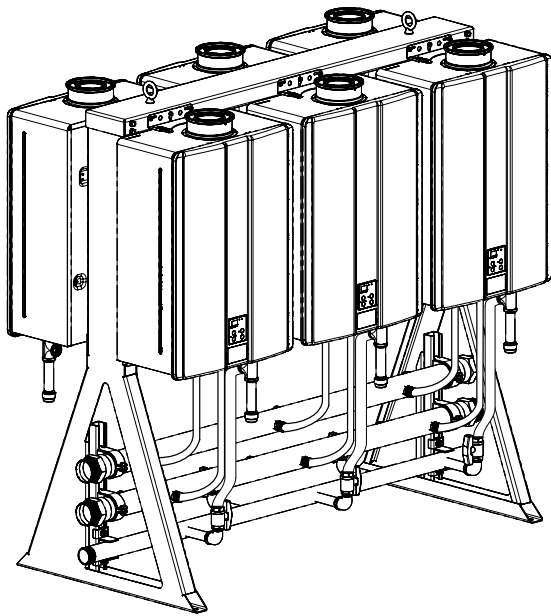


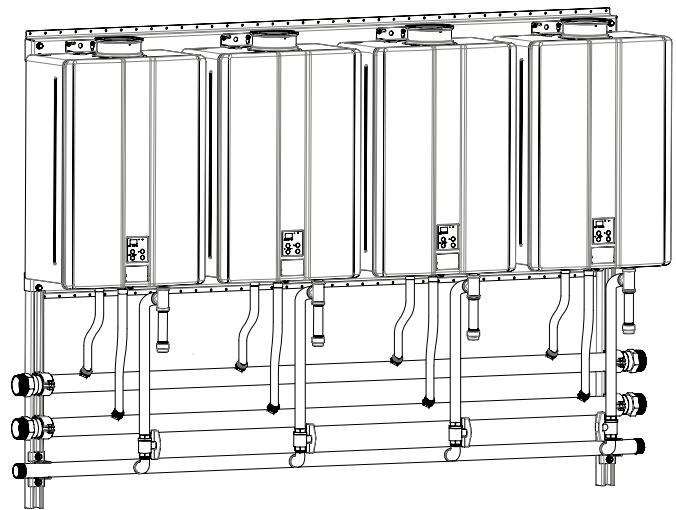
Rinnai®

Tankless Rack System (TRS) Installation Manual

Additional information can be obtained from the appliance manual.



Free Standing Rack
(6 water heaters)



Wall Mounted Rack
(4 water heaters)

⚠ 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 licensed professional.

Table of Contents

Description	3	Parallel Piping Drawing	11
Venting Options.....	3	End caps / Connections	12
TRS Part Nos. and Main Components.....	4	Replacement Parts	12
Specifications	5	Condensate Drain	13
Clearances	7	Checklist for Plumbing.....	13
Hoisting	8	Installation of Gas Supply.....	14
Mounting Wall Racks	9	Connecting Electricity.....	14
Securing Free Standing Racks	9	MSB Installation.....	15
Relief Valve Piping.....	10	Final Checklist.....	17
Piping for Multiple Racks	10	Extended Limited Labor Warranty.....	18

Safety Symbols



This is the safety alert symbol. This symbol alerts you to potential hazards that can kill or hurt you and others.



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



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



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.

Installation

A licensed professional must install the common venting.

The installer should have skills such as

- connecting gas lines, water lines, valves, and electricity
- knowledge of applicable national, state, and local codes

If you lack these skills, contact a licensed professional.

Description

Rinnai Tankless Rack Systems (TRS) include wall mounted and free standing configurations. The wall mounted rack systems are available for 2, 3, or 4 water heaters. Free standing rack systems are available for 2, 3, 4, 5, or 6 water heaters.

The TRS can be ordered with Rinnai’s Common Venting System, which consists of the CVent exhaust venting and PVC intake venting. Up to eight tankless units share the same CVent system.

The Rinnai TRS features design details that make installation straightforward. Gas and water manifolds are properly sized, and condensate drainage mechanisms and electronic controls for multiple units are included.

The racks are constructed of powder-coated aluminum, to stand up to the most demanding commercial environments, while minimizing weight.




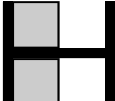
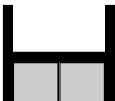
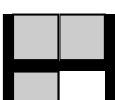


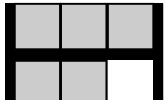

The TRS is designed to be used with Rinnai tankless water heaters only. Do not mount non-Rinnai water heaters on the TRS.

Venting Options

Venting Options	Exhaust Vent Material	Intake Vent Material	Diameter	Max. Units	Max. Vent Length
Common Venting System	PPtI (CVent)	PVC	8"	8	100' (with 7 units)
Concentric	PPs	PVC	5"	1	41'
Dual Pipe*	PPs	PPs or PVC	3"	1	39'
* This venting is provided by Centrotherm through their own distribution network					

- Venting components are packaged together with the pre-assembled Rack, but not assembled. Assembly of the vent system is to be done by the contractor in the field.

TRS Part Nos. and Main Components

Part No.*	Rack type	Rack P/N	Configuration
TRW02iN	2-unit interior wall mount rack, NG	RW2	
TRW02eN	2-unit exterior wall mount rack, NG	RW2	
TRW02iP	2-unit interior wall mount rack, LP	RW2	
TRW02eP	2-unit exterior wall mount rack, LP	RW2	
TRW03iN	3-unit interior wall mount rack, NG	RW3	
TRW03eN	3-unit exterior wall mount rack, NG	RW3	
TRW03iP	3-unit interior wall mount rack, LP	RW3	
TRW03eP	3-unit exterior wall mount rack, LP	RW3	
TRW04iN	4-unit interior wall mount rack, NG	RW4	
TRW04eN	4-unit exterior wall mount rack, NG	RW4	
TRW04iP	4-unit interior wall mount rack, LP	RW4	
TRW04eP	4-unit exterior wall mount rack, LP	RW4	
TRS02iN	2-unit interior free standing rack, NG	RS4	Back to Back 
TRS02eN	2-unit exterior free standing rack, NG	RS4	
TRS02iP	2-unit interior free standing rack, LP	RS4	
TRS02eP	2-unit exterior free standing rack, LP	RS4	
TRS02ILiN	2-unit INLINE interior free standing rack, NG	RS4	Inline (facing same direction) 
TRS02ILeN	2-unit INLINE exterior free standing rack, NG	RS4	
TRS02ILiP	2-unit INLINE interior free standing rack, LP	RS4	
TRS02ILeP	2-unit INLINE exterior free standing rack, LP	RS4	
TRS03iN	3-unit interior free standing rack, NG	RS4	
TRS03eN	3-unit exterior free standing rack, NG	RS4	
TRS03iP	3-unit interior free standing rack, LP	RS4	
TRS03eP	3-unit exterior free standing rack, LP	RS4	
TRS04iN	4-unit interior free standing rack, NG	RS4	
TRS04eN	4-unit exterior free standing rack, NG	RS4	
TRS04iP	4-unit interior free standing rack, LP	RS4	
TRS04eP	4-unit exterior free standing rack, LP	RS4	
TRS03ILiN	3-unit INLINE interior free standing rack, NG	RS6	
TRS03ILeN	3-unit INLINE exterior free standing rack, NG	RS6	
TRS03ILiP	3-unit INLINE interior free standing rack, LP	RS6	
TRS03ILeP	3-unit INLINE exterior free standing rack, LP	RS6	
TRS05iN	5-unit interior free standing rack, NG	RS6	
TRS05eN	5-unit exterior free standing rack, NG	RS6	
TRS05iP	5-unit interior free standing rack, LP	RS6	
TRS05eP	5-unit exterior free standing rack, LP	RS6	
TRS06iN	6-unit interior free standing rack, NG	RS6	
TRS06eN	6-unit exterior free standing rack, NG	RS6	
TRS06iP	6-unit interior free standing rack, LP	RS6	
TRS06eP	6-unit exterior free standing rack, LP	RS6	

Part no. system: TR = tankless rack; W = wall mount; S = stand alone; IL = inline; 2/3/4/5/6 = no. of water heaters; i/e = interior/exterior; NG/LP = fuel type

Specifications

Description	(2) RU98 Wall Mount	(3) RU98 Wall Mount	(4) RU98 Wall Mount
Top Level Part No.	RW2	RW3	RW4
Rack Frame - Specifications	RW2	RW3	RW4
Water Heater Model	RU98i/e N/P		
Frame (HxLxD) - in	54.81 x 41.50 x 12.75	54.81 x 62.00 x 12.75	54.81 x 82.50 x 12.75
Crate Dimensions (HxLxD) - in	62 x 55 x 36	62 x 75 x 36	62 x 95 x 36
Weight - Assembly w/o WHs - lbs	44.1	63.4	82.6
Weight - Water Heaters - lbs	131.4	197.1	262.8
Weight - Fully Assembled - lbs	175.5	260.5	345.4
Weight - Packaging - lbs	121.0	142.0	148.0
Weight - Shipping (total) - lbs	296.5	402.5	493.4

Description	(4/4) RU98 Free Stand (b)	(3/4) RU98 Free Stand (b)	(2/4) RU98 Free Stand (b)
Top Level Part No.	RS4-4	RS4-3	RS4-2
Rack Frame - Specifications	RF4		
Water Heater Model	RU98i/e N/P		
Frame (HxLxD) - in	55.56 x 41.50 x 28.5		
Crate Dimensions (HxLxD) - in	62 x 55 x 36		
Weight - Assembly w/o WHs - lbs	96.1	88.1	80.1
Weight - Water Heaters - lbs	262.8	197.1	131.4
Weight - Fully Assembled - lbs	358.9	285.2	211.5
Weight - Packaging - lbs	129.0	129.0	129.0
Weight - Shipping (total) - lbs	487.9	414.2	340.5

Description	(6/6) RU98 Free Stand (b)	(5/6) RU98 Free Stand (b)	(3/6) RU98 Free Stand (b)
Top Level Part No.	RS6-6	RS6-5	RS6-3
Rack Frame - Specifications	RF6		
Water Heater Model	RU98i/e N/P		
Frame (HxLxD) - in	55.56 x 62.00 x 28.5		
Crate Dimensions (HxLxD) - in	62 x 75 x 36		
Weight - Assembly w/o WHs - lbs	124.6	116.6	100.6
Weight - Water Heaters - lbs	394.2	328.5	197.1
Weight - Fully Assembled - lbs	518.8	445.1	350.2
Weight - Packaging - lbs	148.0	148.0	148.0
Weight - Shipping (total) - lbs	666.8	593.1	498.2

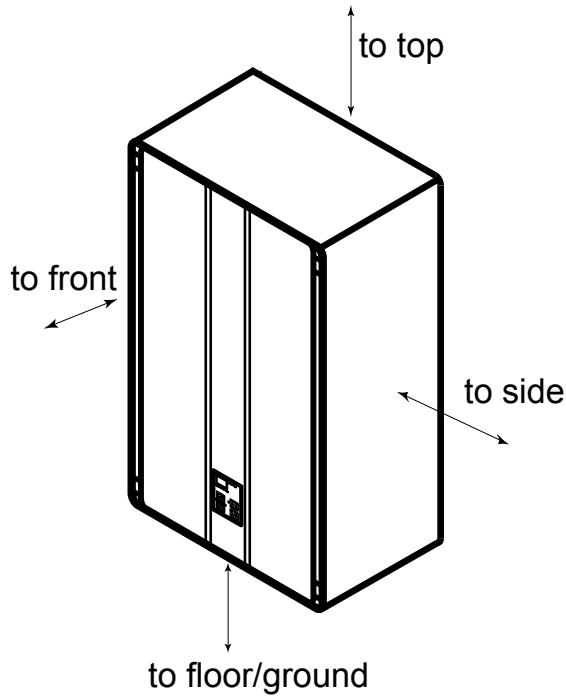
Specifications

Description	(2, 3, 4) RU98 Wall Mount	(4/4, 3/4, 2/4) RU98 Free Stand (b)	(6/6, 5/6, 3/6) RU98 Free Stand (b)
Top Level Part No.	RW2, RW3, RW4	RS4-4, RS4-3, RS4-2	RS6-6, RS6-5, RS6-3
Rack Frame - Specifications	RW2, RW3, RW4	RF4	RF6
Frame Rail Type	Sheet Metal	Sheet Metal	Sheet Metal
Frame Material	0.090 5052-H32	0.090 5052-H32	0.090 5052-H32
Frame Finish	Powder Coat	Powder Coat	Powder Coat
Color	Gray	Gray	Gray
Water & Gas Connections			
Hot Water Trunk Line Diameter	2"	2"	2-1/2"
Cold Water Trunk Line Diameter	2"	2"	2-1/2"
Hot Water Trunk Line Material	Rigid Copper	Rigid Copper	Rigid Copper
Cold Water Trunk Line Material	Rigid Copper	Rigid Copper	Rigid Copper
Water Trunk Connection Type	2" MNPT	2" MNPT	2-1/2" MNPT
Water Header End Cap (field supplied)	2" FNPT	2" FNPT	2-1/2" FNPT
Hot Water Branch Line Diameter	3/4"	3/4"	3/4"
Cold Water Branch Line Diameter	3/4"	3/4"	3/4"
Hot Water Branch Line Material	CSST	CSST	CSST
Cold Water Branch Line Material	CSST	CSST	CSST
Gas Trunk Line Diameter	1-1/4" NPT	1-1/4" NPT	1-1/2" NPT
Gas Trunk Connection Type	1-1/4" MNPT	1-1/4" MNPT	1-1/2" MNPT
Gas Header End Cap (field supplied)	1-1/4" FNPT	1-1/4" FNPT	1-1/2" FNPT
Gas Trunk Line Material	Sch 40 Steel	Sch 40 Steel	Sch 40 Steel
Gas Branch Line Diameter	3/4"	3/4"	3/4"
Gas Branch Line Material	PVC Over CSST	PVC Over CSST	PVC Over CSST
Gas Trunk Line Finish	Powder Coat	Powder Coat	Powder Coat
UniStrut Size	1-5/8" x 13/16"	1-5/8" x 1-5/8"	1-5/8" x 1-3/8"
UniStrut Material	14ga Steel / Zn	12ga S/S	12ga S/S
Hardware Material/Finish	Steel / Zn	S/S 18-8	S/S 18-8
Electrical Requirements	Each water heater requires 120 VAC, 60 Hz power source in a properly grounded circuit. RU98i: 64 W normal operation; 2 W standby; 146 W anti-frost protection. RU98e: 63 W normal operation; 2 W standby; 168 W anti-frost protection.		

BTU and Flow Rates for Common Vented RU98i/e (NG/LP)					
	2 RU98	3 RU98	4 RU98	5 RU98	6 RU98
Flow rate @ 70°F rise (gpm)	10.8	16.2	21.6	27.0	32.4
Flow rate @ 100°F rise (gpm)	7.6	11.4	15.2	19.0	22.8
Maximum input rate (Btuh)	398,000	597,000	796,000	995,000	1,194,000

Clearances

Install the rack system so that the clearances shown below (specified for the water heater in the RU98i and RU98e installation manual) are followed.



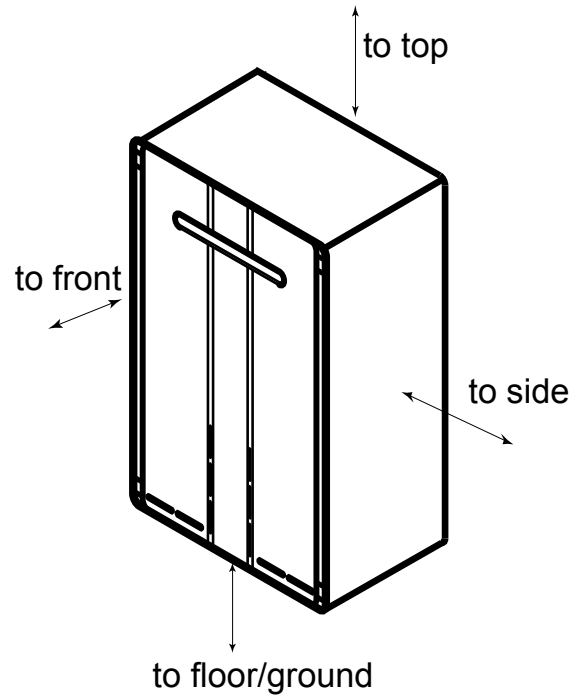
Indoor models: RU98i

	to Combustibles inches (mm)	to Non- Combustibles inches (mm)
Top of Heater	6 * (152)	2 *(51)
Back of Heater	0 (zero)	0 (zero)
Front of Heater	6 (152)	6 (152)
Sides of Heater	2 (51)	1/2 (13)
Ground/Bottom	12 (305)	12 (305)
Vent	0 (zero)	0 (zero)

* 0 inches from vent components and condensate drain line.

The clearance for servicing is 24 inches in front of the water heater.

For closet installation, clearance is 6 inches (152 mm) from the front.



Outdoor models: RU98e

	to Combustibles inches (mm)	to Non- Combustibles inches (mm)
Top of Heater	12 (305)	2 (51)
Back of Heater	0 (zero)	0 (zero)
Front (panel)	24 (610)	0 (zero)
Front (exhaust)	24 (610)	24 (610)
Sides of Heater	6 (152)	1/8 (3.2)
Ground/Bottom	12 (305)	2 (51)

The clearance for servicing is 24 inches in front of the water heater.

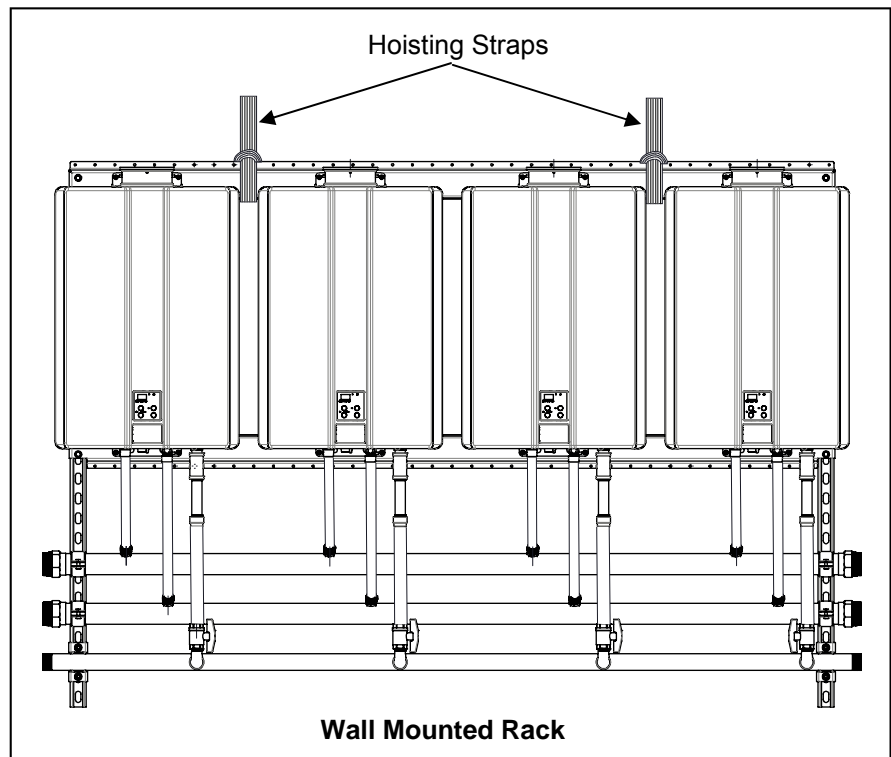
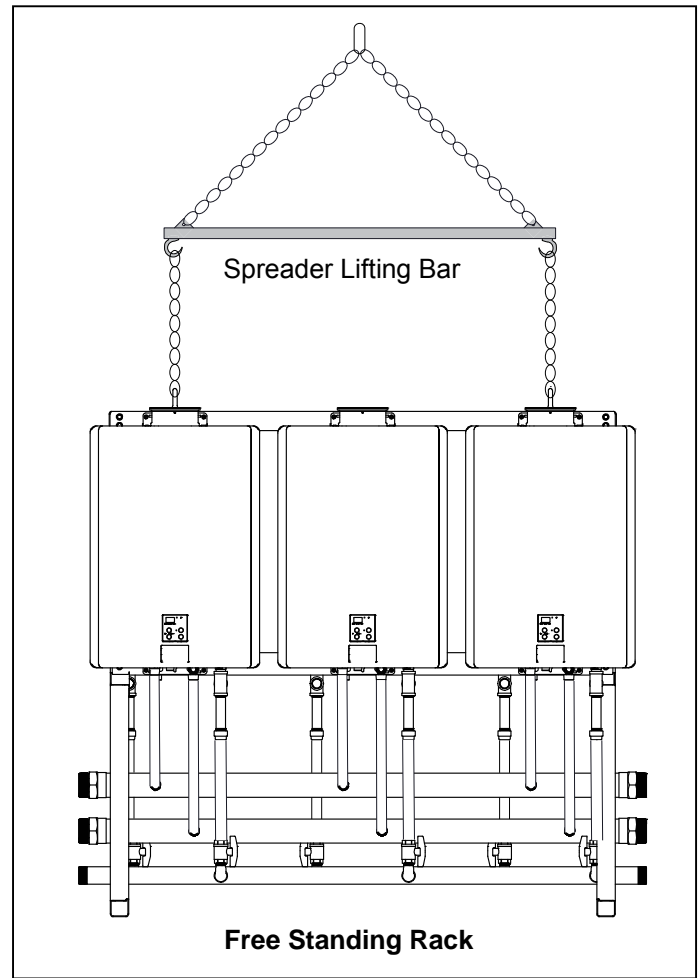
Hoisting

Lugs are installed on the free standing 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 free standing racks.

For wall mounted racks, use hoisting straps looped around the top frame.

The weights of the complete assemblies are in the Specifications section.

DO NOT hoist the crate or palette.

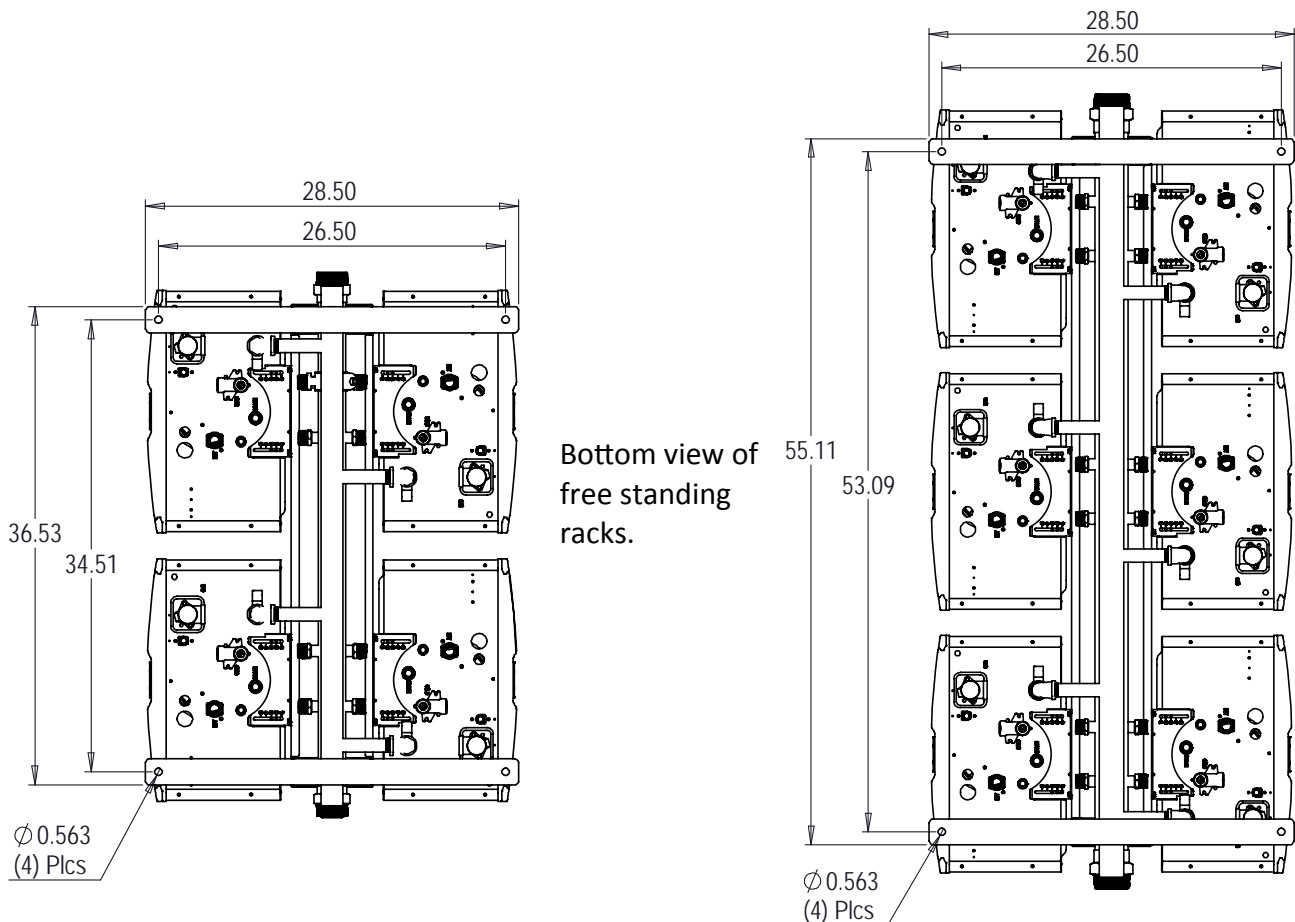


Mounting Wall Racks

1. Identify the installation location and confirm that the installation will meet all required clearances.
2. Securely attach the rack to the wall. Ensure that the attachment strength is sufficient to support the weight. Refer to the weight in the Specifications section.
Use a leveling tool to ensure that the water heater is level. Proper operation requires that the water heater be level. The rack / water heaters should be installed in an upright position. Do not install upside down or on its side.

Securing Free Standing Racks

1. Use 4-1/2" HILTI KB-TZ expansion anchors or approved equivalent. Minimum embedment (hef) = 3.25". Minimum concrete thickness to be 6".
2. All mechanical components shall be anchored and installed per the notes in this manual. Where no detail is indicated, anchorage of equipment to building structure shall be in accordance to the applicable national and/or local codes having jurisdiction.
3. The size and embedment specified are for anchors installed in stone or aggregate concrete only, for other anchorage details the contractor or engineer on record for the building shall consult with a licensed structural engineer for all anchorage of equipment not called out in this manual.
4. In the event of a conflict or inconsistency between items indicated in this manual with code requirements, the more stringent standard shall prevail.



Relief Valve Piping

Each Rinnai tankless water heater on the TRS comes installed with Isolation valves and a pressure relief valve. Refer to the installation and operation manual for more information on proper piping for the relief valve drain.



Piping for Multiple Racks

Multiple rack systems should be installed in parallel using a secondary manifold from the building cold and hot water supply. Reference the drawing for guidance.

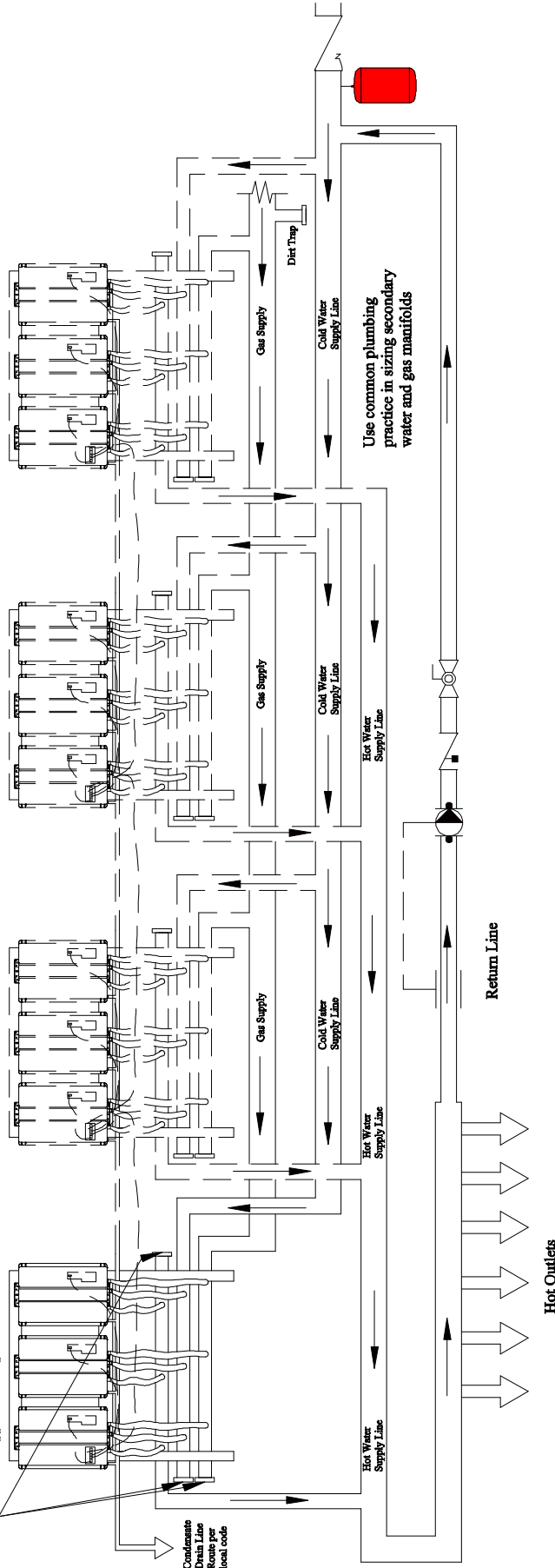
A low pressure gas regulator must be installed prior to the rack system. Note the maximum cumulative input for the system when sizing the gas regulator.

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

**Condensing Tankless
Rack Parallel Piping System**

Rack water manifolds
are sized for maximum
water heater flowrate at
4 ft/s velocity

Typical for each rack:
Field supplied end caps.
Refer to rack spec sheet for size.
Must be approved for potable water.



Ghosted units are
potential supplemental
banks of tankless racks

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. The 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.

Rinnai America Corporation
103 International Drive
Peachtree City, GA 30269
1-800-621-9419

Tolerance
Fraction = ± 1/8
X-X = ± 0.030
X-XX = ± 0.015
X-XXX = ± 0.005

This drawing is the exclusive property of Rinnai America Corporation; it may not be reproduced or given to third parties.

Drawn By: DRM
Approved By: RS

Rinnai

Condensing Tankless
Rack Parallel Piping System

SIZE: A
SCALE: NTS
DATE: 07/23/12

DWG. NO.: RPPS
REV: D
SHEET: 1 of 1

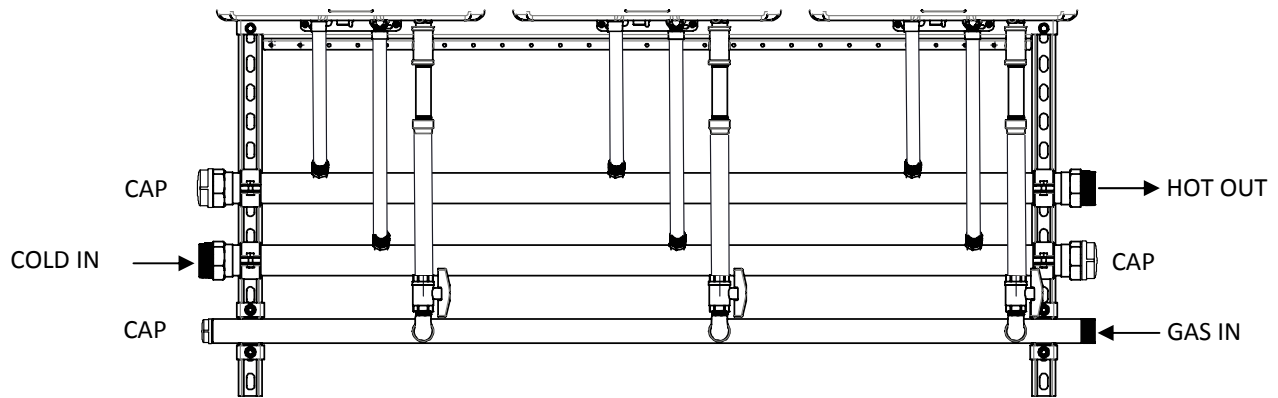
End Caps / Connections

End caps are to be field supplied and to be of the following materials:

- Cold water cap - brass
- Hot water cap - brass
- Gas cap - black iron

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

Leak check the capped ends of the manifolds.



Replacement Parts

If any parts are replaced on the rack, they must be the same or equivalent. Refer to the parts and descriptions below.

Rinnai Part No.	Description	Length (L)
109000328	Water CSST 3/4" Branch Line 3/4" FNPT X 3/4" MNPT X 7.5"	7-1/2"
107000115	Water CSST 3/4" Branch Line 3/4" FNPT X 3/4" MNPT X 10"	10"
109000329	Water CSST 3/4" Branch Line 3/4" FNPT X 3/4" MNPT X 11.25"	11-1/4"
109000330	Water CSST 3/4" Branch Line 3/4" FNPT X 3/4" MNPT X 15"	15"
109000331	Water CSST 3/4" Branch Line 3/4" FNPT X 3/4" MNPT X 17.5"	17-1/2"
109000327	Gas CSST 3/4" Branch Line 3/4" MNPT X 3/4" MNPT X 21"	21"

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.

Condensate Drain Manifold must be field fabricated (not shown in diagram)

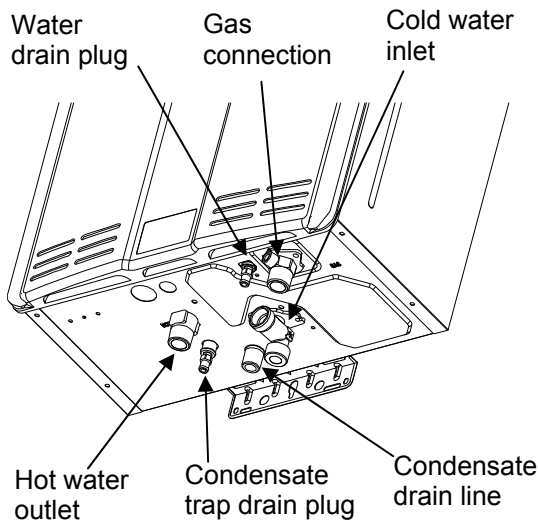
Condensate piping shall be CPVC or PVC material and shall not be smaller than the drain connection on the appliance.

Components of the condensate drainage shall be CPVC or PVC material. All components shall 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.

Piping Diagram for Basic Installation



The condensate drain pipe (along its entire length) must be at least the same diameter as the drain line.

Checklist for Plumbing

- Purge the water line of all debris and air by closing the hot isolation valve and opening the cold isolation valve and its drain. **Debris will damage the water heater.** Use a bucket or hose if necessary.
- Ensure that hot and cold water lines are not crossed to the unit and are leak free.
- Ensure that a pressure relief valve is installed with a rating that exceeds the BTU input of the water heater model. Refer to the rating plate on the side of the water heater for BTU input.
- 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 the 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.
- Check for proper water pressure to the water heater. Minimum water pressure is 50 psi. Rinnai recommends 60-80 psi for maximum performance.

Installation of Gas Supply

WARNING

1. If you are not knowledgeable or qualified to install gas lines or connections, then contact a licensed professional to install the gas supply.
2. Turn off 120v power supply.
3. Turn off the gas.
4. Gas is flammable. Do not smoke or provide other ignition sources while working with gas.
5. Do not turn on the water heater or gas until all fumes are gone.

MUST DO

- Check the type of gas and the gas inlet pressure before connecting the water heater. If the water heater is not of the gas type that the building is supplied with, DO NOT connect the water heater. Contact the dealer for the proper unit to match the gas type.
- 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.
- Before placing the appliance in operation all joints including the heater must be checked for gas tightness by means of leak detector solution, soap and water, 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.)
- Use approved connectors to connect the unit to the gas line. Purge the gas line of any debris before connection to the water heater.
- Any compound used on the threaded joint of the gas piping shall be a type which resists the action of liquefied petroleum gas (propane / LPG).
- The gas supply line shall be gas tight, sized, and so installed as to provide a supply of gas sufficient to meet the maximum demand of the heater and all other gas consuming appliances at the location without loss of pressure.

Connecting Electricity

WARNING

Do not use an extension cord or an 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.

Indoor 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.

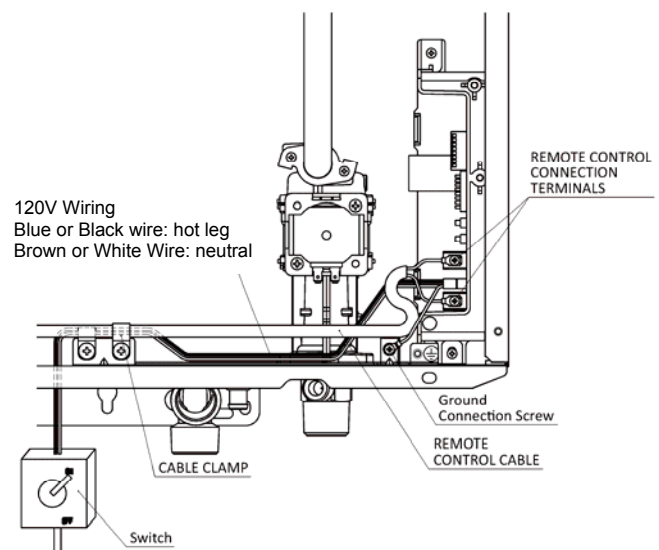
Do not rely on the gas or water piping to ground the water heater. A screw is provided in the junction box for the grounding connection.

The water heater requires 120 VAC, 60 Hz power from a properly grounded circuit.

If using the 5 foot long power cord, plug it into a standard 3 prong 120 VAC, 60 Hz properly grounded wall outlet.

On outdoor models, a disconnect switch must be provided and installed for the incoming 120 VAC power. It 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.

The wiring diagram is located on the Technical Sheet attached to the inside of the front cover.



MSB Installation

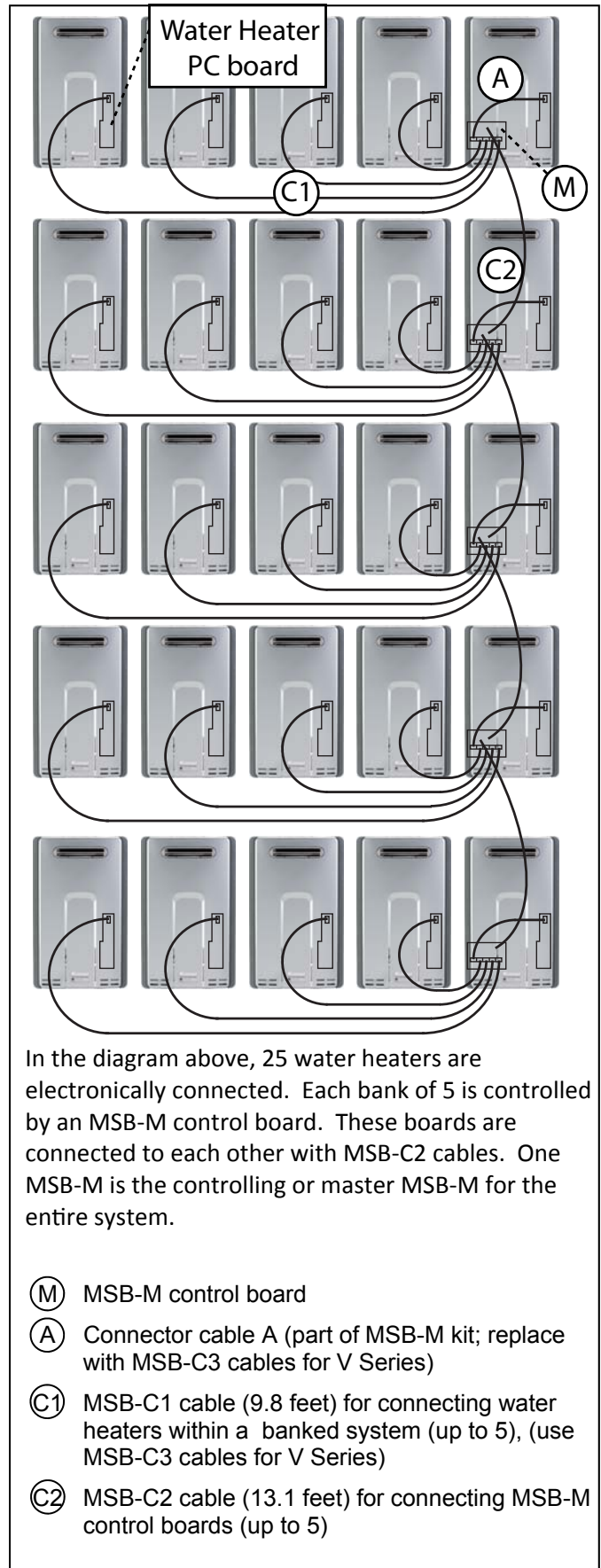
All of the water heaters should be electronically connected using the MSB control system. The only exception is when a water heater is dedicated to recovering a tank. The MSB kits can electronically connect up to 25 water heaters.

When over 5 water heaters are connected together, MSB-M units are connected using MSB-C2 kits.

If multiple MSB-M are used, then at least three water heaters should be connected to each MSB-M. Example: With 7 water heaters, one MSB-M should control 4 water heaters and the other MSB-M should control 3 water heaters.

The temperature setting for all of the connected water heaters is controlled by the temperature controller connected to the water heater with the master MSB Board. Temperature controllers connected to the other units will provide maintenance codes for their respective units.

On applicable models a single MCC-91 can be connected to the master MSB Board to provide temperatures greater than 140°F for all the water heaters in the MSB system.



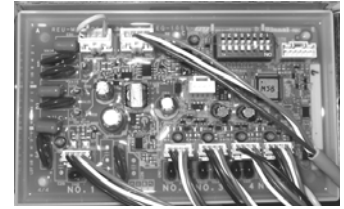
MSB Installation

1. On the master MSB, one connector is connected to the terminal connector and the other one is connected to the MSB Communication cable.
2. When 2 MSB boards are used a MSB Communication cable will be installed between the master MSB board and the second MSB. The open connector will have the Terminal connector installed on both MSB boards.

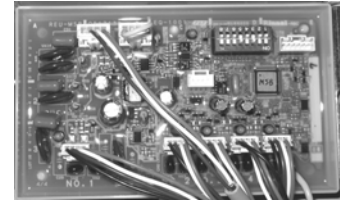
A maximum of 5 MSB boards can be connected to each other. The terminal connector is connected on the terminal MSB which has an open connector.

NOTE: When viewing the installed MSB board, the dip switch will be as shown below (upside down).

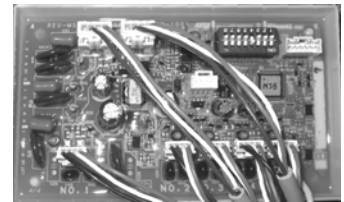
Master MSB board



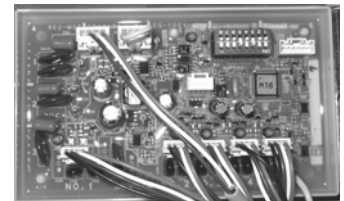
2nd MSB board



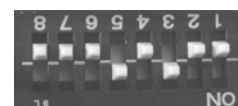
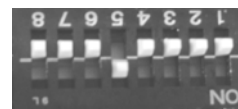
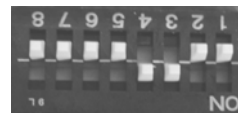
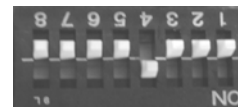
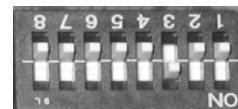
2nd to 4th MSB board



5th or Terminal MSB board



3. Set No 3 switch on the master MSB to ON. The LED light 6 should turn ON confirming the connection.
4. Set No 4 switch on the second MSB to ON. The LED light 6 should turn ON confirming the connection.
5. Set No 3 and No 4 switches on the third MSB board to ON. The LED light 6 should turn ON confirming the connection.
6. Set the No 5 switch on the fourth MSB board to ON. The LED light 6 should turn ON confirming the connection.
7. Set No 3 and No 5 switches on the on the fifth MSB board to ON. The LED light 6 should turn ON confirming the connection.



Final Checklist

- The water heater is not subject to corrosive compounds in the air.
- The water supply does not contain chemicals or exceeds total hardness that will damage the heat exchanger.
- Clearances from the water heater unit are met.
- Clearances from the vent termination / air intake are met.
- For indoor models, ensure you have used the correct venting products for the model installed and that you have completely followed the venting manufacturer's installation instructions and these installation instructions.
- For indoor models, verify that the vent system does not exceed the maximum length for the number of elbows used.
- For indoor models, verify that switch No. 1 in the SW1 DIP switch (tan switches) has been adjusted for vent length if necessary. Refer to the section on Maximum Vent Length.
- Purge the water line of all debris and air by closing the hot isolation valve and opening the cold isolation valve and its drain. **Debris will damage the water heater.** Use a bucket or hose if necessary.
- Ensure that hot and cold water lines are not crossed to the unit and are leak free.
- A manual gas control valve has been placed in the gas line to the water heater.
- Ensure that a pressure relief valve is installed with a rating that exceeds the BTU input of the water heater model. Refer to the rating plate on the side of the water heater for BTU input.
- 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 the 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.
- Check the gas lines and connections for leaks.
- Confirm that the gas inlet pressure is within limits.
- Confirm that the water heater is rated for the gas type supplied.
- Confirm that the electricity is supplied from a 120 VAC, 60 Hz power source, is in a properly grounded circuit, and turned on.
- Verify the temperature controller is functioning properly.
- Verify that switches No. 2 and No. 3 in the SW1 DIP switch (tan switches) is set correctly for your altitude.
- Verify the system is functioning correctly by connecting your manometer to the gas pressure test port on the water heater. Operate all gas appliances in the home or facility at high fire. The inlet gas pressure at the water heater must not drop below that listed on the rating plate.
- If the water heater is not needed for immediate use, then drain the water from the heat exchanger.
- Install the front panel.
- Explain to the customer the importance of not blocking the vent termination or air intake.
- Explain to the customer the operation of the water heater, safety guidelines, maintenance, and warranty.
- The installation must conform with local codes or, in the absence of local codes, with the *National Fuel Gas Code, ANSI Z223.1/NFPA 54*, or the *Natural Gas and Propane Installation Code, CSA B149.1*.
- Inform the consumer if a water softening system is not installed.
- Leave the entire manual taped to the water heater (indoor models), temperature controller (outdoor models), or give the entire manual directly to the consumer.**

Extended Limited LABOR Warranty*

Tankless Rack System

REGISTRATION REQUIRED*

Rinnai is providing the opportunity to extend your Rinnai Standard Limited Warranty for labor only on the tankless water heater product installed as part of the Tankless Rack System and used in a commercial application. You must register the product within 30 days of purchase of the system to qualify.

The limited warranty period on the Labor coverage for Tankless Water Heaters installed on the Tankless Rack System is extended for an additional 12 months (a total of 24 months labor coverage from date of purchase), when registered. **Products not registered will still be covered under the Rinnai standard product limited warranty as provided in the Operating Instruction manual which comes with the Tankless water heater. Warranty information is also available on Rinnai's web site at www.rinnai.us. You can register at www.rinnairegistration.com or by calling 1-866-RINNAI-1 (746-6241), except registration is not required in California and Quebec.**

What is covered?

This 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. Improper installation may void this Limited Warranty. Rinnai strongly suggests that you use a licensed professional who has attended a Rinnai installation training class before installing this water heater. This Limited Warranty extends to the original purchaser and subsequent owners, but only while the product remains at the site of the original installation. This Limited Warranty only extends through the first installation of the product and terminates if the product is moved or reinstalled at a new location.

How long does coverage last?

Item	Period of Coverage (from date of purchase)		
	Labor	Parts	Heat Exchanger
Tankless Water Heaters	1 year (2)	5 years (1)	5 years (1)
Rack and Components		1 year	

Only applicable if product is registered within 30 days of purchase and the other conditions are met. Note to California and Quebec Residents, and residents of other jurisdictions that prohibit warranty benefits conditioned on registration, registration is not required to obtain longer warranty periods and failure to register does not diminish your warranty rights. www.rinnai.us/warranty

[1] The warranty period is reduced to 3 years from date of purchase when the water heater is used as a circulating water heater within a hot water circulation loop, where the water heater is in series with a circulation system and all circulating water flows through the water heater, and where an on-demand recirculation system is not incorporated.

On-demand recirculation is defined as a hot water recirculating loop or system that utilizes existing hot and cold lines or a dedicated return line, and only activates when hot water is used. It can be activated by a push button, motion sensor, or voice activation but not by a temperature sensor. A timer added to a standard recirculating pump is not considered as on-demand.

[2] Labor coverage is extended to 5 years in residential applications and to 2 years in commercial applications if the product is registered within 30 days (except registration is not required in California and Quebec) and/or if the other conditions above in the Residential Applications and Commercial Applications sections are satisfied.

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. Rinnai will pay reasonable labor charges associated with the repair or replacement of any part or component of the tankless water heater. All repair parts must be genuine Rinnai parts. All repairs or replacements must be performed by a licensed professional that is properly trained, state qualified or licensed to do the type of repair.

Replacement of the product may be authorized by Rinnai only. 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 will replace the product with a comparable product at Rinnai's discretion. If a component or product returned to Rinnai is found to be free of defects in material or workmanship, or damaged by improper installation

or damaged during return shipping, the warranty claim for product, parts and labor may be denied.

How do I get service?

You must contact a licensed professional for the repair of a product under this Limited Warranty. For the name of a licensed 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 tankless water heater, please visit www.rinnai.us. For those without internet access, please call 1-866-RINNAI1 (746-6241). Receipt of Registration by Rinnai will constitute proof-of-purchase for this product. 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 operating difficulties due to the following:

- accident, abuse, or misuse
- alteration of the product or any component part
- misapplication of this product
- improper installation
 - ◇ 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
- water quality
- 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.
- 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 and further 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.

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.

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

— Ask about — Rinnai®

Rinnai's other fine products

EXPERIENCE OUR INNOVATION™



Tankless Water Heaters

- Residential and Commercial Applications
 - Continuous Hot Water
 - ENERGY STAR® qualified models
 - Up to 9.8 GPM
 - Internal or External Installation
 - Digital Temperature Control
-



Condensing Tankless Water Heaters

- Residential and Commercial Applications
 - ENERGY STAR® qualified models
 - Up to 0.96 Energy Factor (EF)
 - Internal or External Installation
 - Pair up with the Rinnai Air Handler for efficient home heating
-



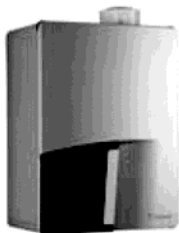
Direct Vent Furnaces

- High Efficiency
 - Cool-to-the-touch Cabinet
 - Vent Terminal A Included
 - Blower Included
-



Hydronic Furnace

- Designed for Use with Rinnai Systems
 - Domestic Hot Water Priority
 - Optional Programmable Thermostat
 - Zero Clearance to Combustibles
 - Accommodates Standard Cased-Coils
-



Boilers

- Residential and Commercial Applications
 - ENERGY STAR® qualified models
 - Up to 96.5% AFUE efficiency
 - Compact wall mounted design
 - ASME accredited models
-

Register your product at
www.rinnai.us
or call 1-866-RINNAI1 (746-6241)

For information on Rinnai's products contact
Rinnai America Corporation
103 International Drive
Peachtree City, GA 30269
TOLL FREE: 1-800-621-9419
FAX: 678-829-1666
www.rinnai.us

10000294
8/2012