

TANKLESS WATER HEATER EXPRESS INSTALLATION GUIDE

Tips for Professional Installation



BEFORE YOU BEGIN

This guide is designed to provide a high-level installation overview and address key installation questions. It is not intended to replace the **Installation and Operating Instructions Manual** provided with the unit. All instructions and installation requirements as well as any local or national codes must be followed. Installation and service must be performed by a qualified licensed installer, service agency, or the gas supplier. We are not liable for any damages or defects resulting from improper installation.

OPTIONAL ACCESSORIES

- 2" or 3" PVC Sidewall Vent Kit
- Condensate Neutralizer
- Tankless Isolation Valves
- Floor Stand

STEP 1: Removing From The Box

- Remove unit and accessories from the box.
 **WARNING:** Do NOT use the condensate trap or vent connector to lift the unit out of the box, damage will occur.
- Check unit for damage.
- Ensure all accessories are present:
 - ☐ Wall mounting bracket and lag bolts
 - ☐ Condensate trap hose
 - ☐ Propane conversion kit
 - ☐ Installation and Operating Instructions
 - ☐ Controller Manual
 - ☐ User's Information Manual

STEP 2: Find Installation Location | Installation Manual - Pre-Installation Check

- Consider the following when selecting a location:
 - Sturdy wall (Step 3)
 - Vent termination location (Step 5)
 - Vicinity to gas, water, and power supply (Steps 9, 7, 10)
 - Condensate drain (Step 6)
 - Minimum clearance requirements

SURFACE	MIN. DISTANCE FROM COMBUSTIBLE SURFACES	RECOMMENDED DISTANCE FOR INSTALLATION AND SERVICE
Front	2"	24"
Rear	0"	0"
Left Side	1.5"	6" (labels may be difficult to read with reduced clearance)
Right Side	4"	6" (labels may be difficult to read with reduced clearance)
Top	2"	24"
Bottom	8"	24"

STEP 3: Mounting | Installation Manual - 1.3 Location

- Mount the bracket to the wall with two lag bolts when securing to wood studs. Vent connection is 8.5" above lag bolts.
- Install the initial pipe fittings on the bottom connections while using caution to avoid getting Teflon tape, pipe dope, etc. into the fittings.
- Hang the unit centered on the bracket.
- If desired, secure the bottom of the unit to the wall with two field supplied 1/2" EMT clips.

 Tankless Isolation Valves are recommended to allow easy servicing.

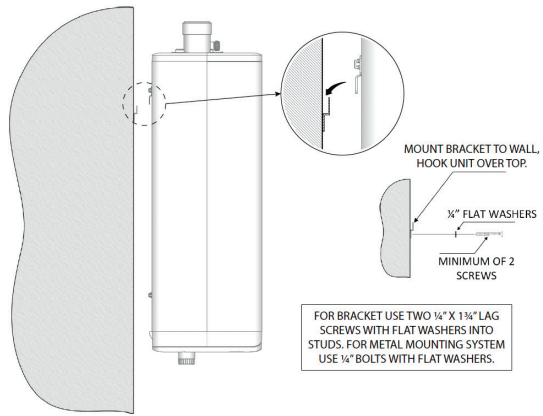
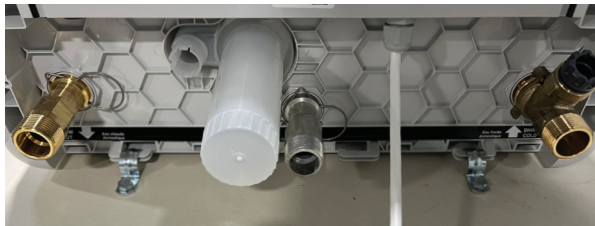


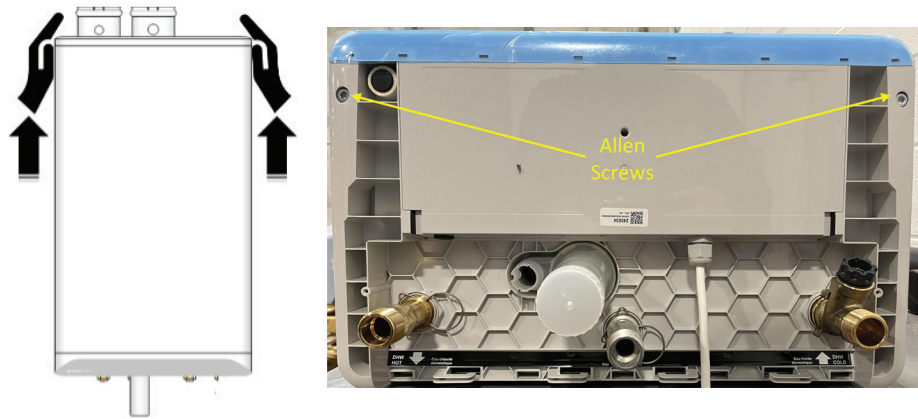
Figure 2: Wall mounting of unit



Bottom of unit secured with two field supplied 1/2" EMT clips.

STEP 4: Removing the Cover | Installation Manual - 1.3 Location

- Loosen the two captive 5mm Allen screws at the bottom of the unit.
- Place your palms at the top of the cover so your fingers are on top of the unit.
- Apply inward pressure while using your fingers to lift the cover straight up and off the unit.



STEP 5: Venting | Installation Manual - 1.4 Exhaust Venting and Air Intake

- Direct vent the unit using only PVC, CPVC, or Polypropylene components approved by the authority having jurisdiction. Follow all venting manufacturer instructions.
 **WARNING:** This unit must have the combustion air supply connected and terminated to the outdoors.
- Calculate the equivalent vent length using the table below.
- Combustion air intake and exhaust piping must terminate in the same pressure zone (roof, sidewall) except for vertical vent and sidewall combustion air.
- Vent termination must comply with all minimum clearances of the authority having jurisdiction and as shown in the figures below.
- Begin the vent system installation at the unit and work towards the outdoor termination. Maintain at least 1/4" per foot pitch towards the unit or as required by the venting manufacturer.
- Verify that all vent connections are liquid and pressure tight.

EXHAUST PIPE SIZE/ FITTINGS	MAXIMUM EQUIVALENT LENGTH
Schedule 40 PVC, CPVC, or PPs	
2"	65' *
3"	120'
2" or 3" 90° Long Sweep Vent Elbow	Allow 5 equivalent feet
2" or 3" 90° Short Sweep Vent Elbow	Allow 8 equivalent feet
2" or 3" 45° Vent Elbow	Allow 3 equivalent feet
PPs	
PPs 87-90° Elbow	Allow 8 equivalent feet
Flex PPs	
2" PPs Flex	Not Allowed
3" PPs Flex	35' Actual (Equivalent = Actual x 1.4)

* Approximate input derate of 10-16% at 2" maximum vent length.

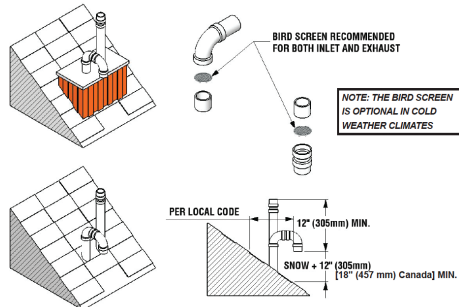


Figure 10: Rooftop vent terminal configurations

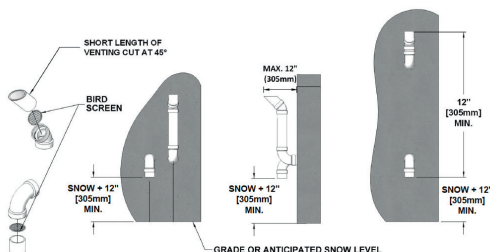


Figure 13: Sidewall vent termination - piping configuration

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STEP 6: Condensate Removal | Installation Manual - 1.5 Condensate Removal

1. Fill the condensate trap cup with water.
2. Attach the drain hose to the condensate trap outlet and run to a suitable drain or condensate pump.
3. A condensate neutralizer must be installed when draining into any metallic drain to prevent corrosion and deterioration.

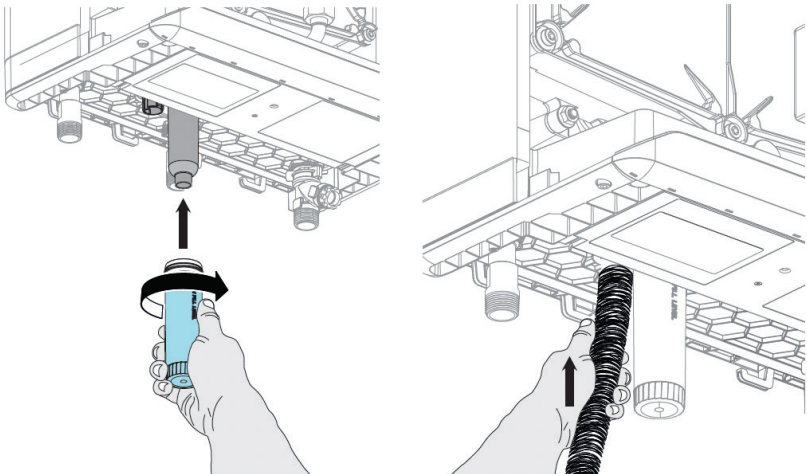
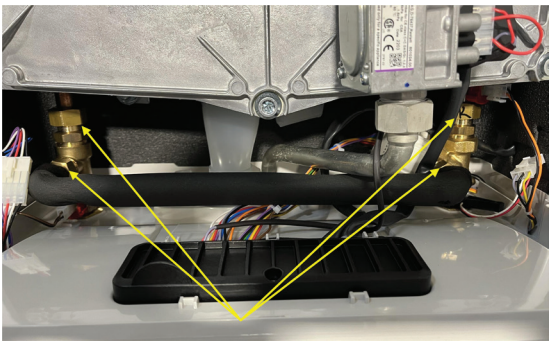


Figure 21: Condensate trap installation

STEP 7: DHW Piping | Installation Manual - 1.7 Domestic Hot Water System

1. An installer supplied pressure relief valve meeting the following requirements must be installed on the DHW supply pipe before any isolation valves and piped to a suitable drain.
 - Maximum pressure rating of 150 PSI
 - Minimum capacity of 200,000 BTU/Hr
2. Connect the unit to the cold water supply and the DHW system piping.
3. Verify all internal fittings are leak free prior to pressurizing the DHW system as some loosening could occur during shipping. Do not overtighten.



Verify all internal fittings are leak free.

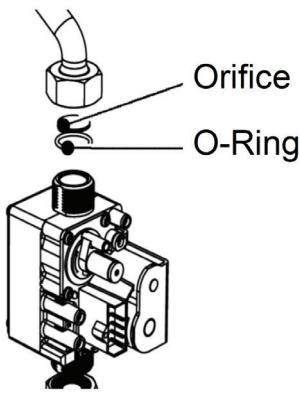


DHW on-demand application: DHW relief valve on outlet of water heater. Isolation valve *not allowed* between water heater and relief valve.

STEP 8 : Propane Conversion | Installation Manual - 3.4 Fuel Conversion

All models are factory fire tested with natural gas as shown on the rating plate. The unit must be converted for propane operation.

1. Disconnect the nut at the gas valve outlet (top of the valve) and remove the orifice and O-ring.
2. Insert the correct propane orifice into the O-ring, and re-install into the nut at the gas valve outlet (top of the gas valve) and then tighten the nut.
3. Affix propane conversion labels to the unit.



MODEL	PROPANE ORIFICE SIZE
199,000 BTU/hr	535

STEP 9: Gas Piping | Installation Manual - 1.8 Gas Piping

1. Verify that the gas supply system including gas line, pressure regulator, and gas meter are sized properly for the BTU/Hr rating using the table below.
2. Gas supply piping must include manual shutoff valve and a sediment trap.
3. Connect the gas supply piping to the unit using natural gas/propane rated pipe thread sealant.
4. Purge air from the gas line by opening the inlet gas pressure port using a Torx 15 screwdriver.
5. Perform a bubble test of all gas connections and fittings for leaks.



WARNING A properly sized and installed gas supply is critical to the proper operation of the unit. Please see National and Local Fuel Gas Code for details.

MODEL	1/2" IPS	3/4" IPS	1" IPS
199,000 BTU/hr (Nat. gas)	10'	40'	150'
199,000 BTU/hr (Propane)	30'	125'	400'

STEP 10: Electrical | Installation Manual - 1.9 Electrical Connections

1. Plug the units power plug into either the field wiring junction box if used or a non GFCI outlet.