

Modular Rack Manifold Kit Installation Instructions

Part # AP24557 – 2 Side by Side (2SS)
Part # AP24555 – 3 Side by Side (3SS)
Part # AP24554 – 4 Side by Side (4SS)
Part # AP24556 – 2 Back to Back (2BB)
Part # AP24553 – 4 Back to Back (4BB)

SAFETY CONSIDERATIONS

Installation, start-up, and servicing of the unit must be done with due care and attention, and must only be performed by competent, qualified, licensed, and trained technicians. Failure to read and comply with all instructions and applicable National and local codes may result in hazardous conditions that could result in property damage and injury to occupants which in extreme cases might result in death.

Refer to the Use and Care Manual / Installation and Operating Instructions included with the tankless water heater for additional information to complete the installation.

HAZARDS & PRECAUTIONS

DANGER

Points out an imminently hazardous situation which must be avoided in order to prevent serious injury or death.

WARNING

Points out a potentially hazardous situation which must be avoided to prevent serious injury or death.

CAUTION

Points out a potentially hazardous situation which must be avoided to prevent possible moderate injury and/ or property damage.

NOTE

Points out installation, maintenance and operation details that will result in enhanced efficiency, longevity and proper operation of your unit.

BEST PRACTICES

Points out recommendations for better installation.

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The Modular Rack Manifold Kit provides all the water and gas piping required to easily connect multiple Tankless Water Heaters together for large DHW demands.

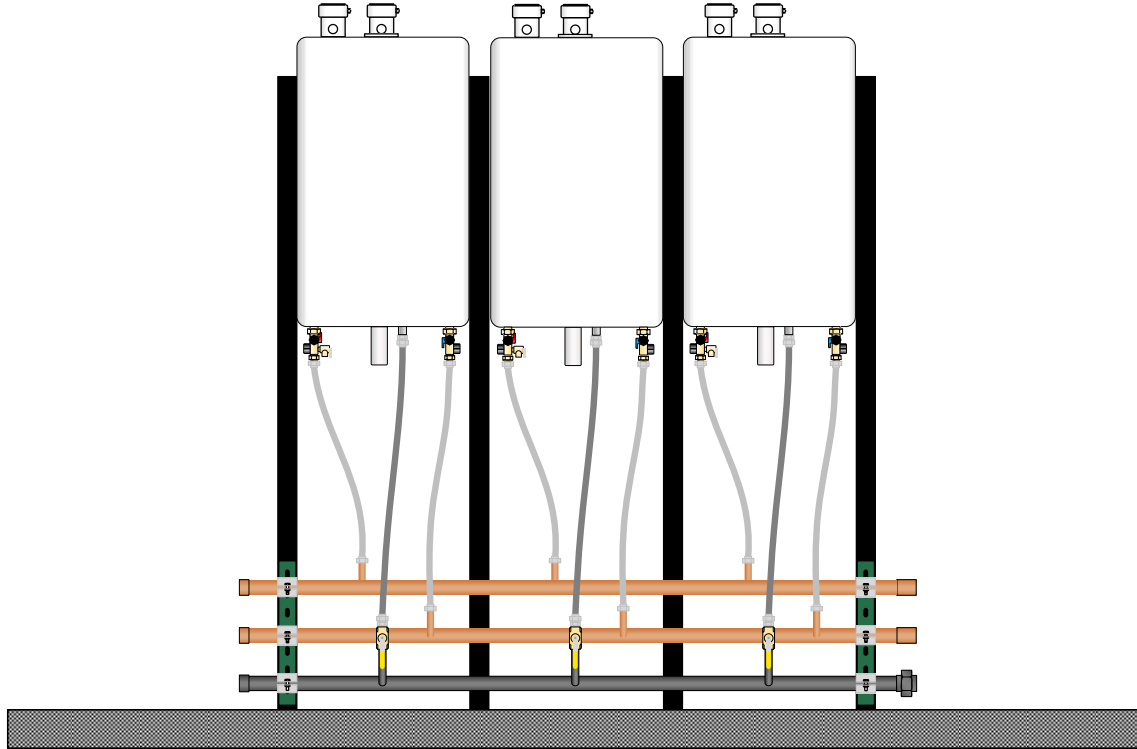


Figure 1: Tankless Water Heater Cascade System using the Modular Rack & Manifold System

The Modular Rack Manifold System can accommodate up to eight Tankless Water Heaters configured in a side by side or back to back orientation. Side by side configurations can be mounted on a wall or on the optional Modular Rack. Back to back configurations require the use of the Modular Rack. Tankless Water Heater Cascade Systems consisting of greater than four units will require the use of two manifolds connected together as indicated in the table below.

Modular Rack Manifold Kit Configurations

Tankless Water Heaters	Side by Side Orientation	Back to Back Orientation
2	2SS	2BB
3	3SS	4BB*
4	4SS	4BB
5	3SS & 2SS	4BB & 2BB*
6	4SS & 2SS	4BB & 2BB
7	4SS & 3SS	4BB & 4BB*
8	4SS & 4SS	4BB & 4BB

* Installer must cap unused manifold connections.

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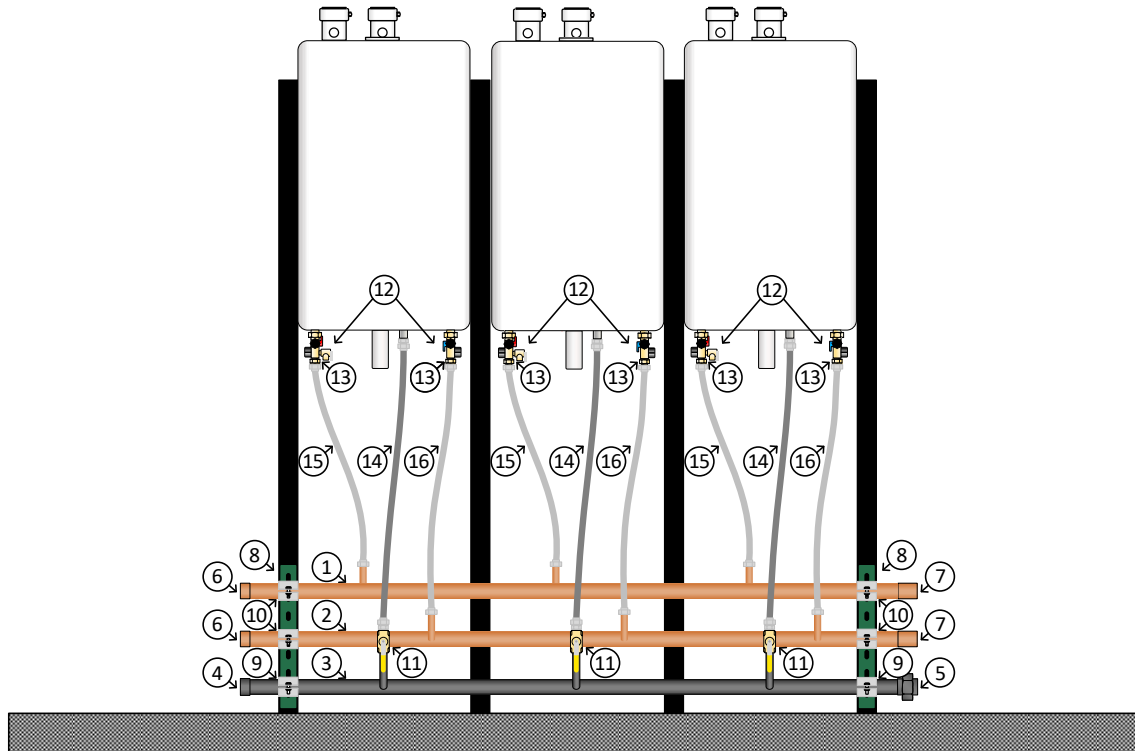


Figure 2: Modular Rack Manifold Kit Components (3SS Shown)

Modular Rack Manifold Kit Components

Item	2SS (Qty)	3SS (Qty)	4SS (Qty)	2BB (Qty)	4BB (Qty)	Description
1	1	1	1	1	1	2" Copper hot water manifold
2	1	1	1	1	1	2" Copper cold water manifold
3	1	1	1	1	1	1-1/2" Steel gas header
4	1	1	1	1	1	1-1/2" Cast iron cap
5	1	1	1	1	1	1-1/2" Cast iron union
6	2	2	2	2	2	2" Copper cap
7	2	2	2	2	2	2" Copper coupling
8	2	2	2	2	2	1-5/8" x 1-5/8" x 18" Mounting strut
9	2	2	2	2	2	1-7/8" Gas header strut clamp
10	4	4	4	4	4	2-1/8" Water manifold strut clamp
11	2	3	4	2	4	3/4" Gas shutoff valve
12	2	3	4	2	4	Tankless water heater valve kit with 150 PSI relief valve
13	4	6	8	4	8	3/4" x 3/4" Male adapter
14	2	3	4	2	4	3/4" x 30" Flexible gas line
15	2	3	4	2	4	3/4" x 18" Stainless steel flexible water line
16	2	3	4	2	4	3/4" x 24" Stainless steel flexible water line
17	1	1	1	1	1	Assembly hardware

Modular Rack Manifold Kit Installation Instructions

1. Before beginning installation, confirm the Modular Rack Manifold System is correct for the number of installed Tankless Water Heaters and is the correct orientation. Confirm all parts of the kit(s) are present before beginning installation.
2. Mount the Tankless Water Heaters to the Modular Rack or a wall as shown in the Use and Care Manual / Installation and Operating Instructions. When mounting to a wall, Tankless Water Heaters must be mounted 20" [508mm] apart, on center and at least 38" [965mm] above the floor.

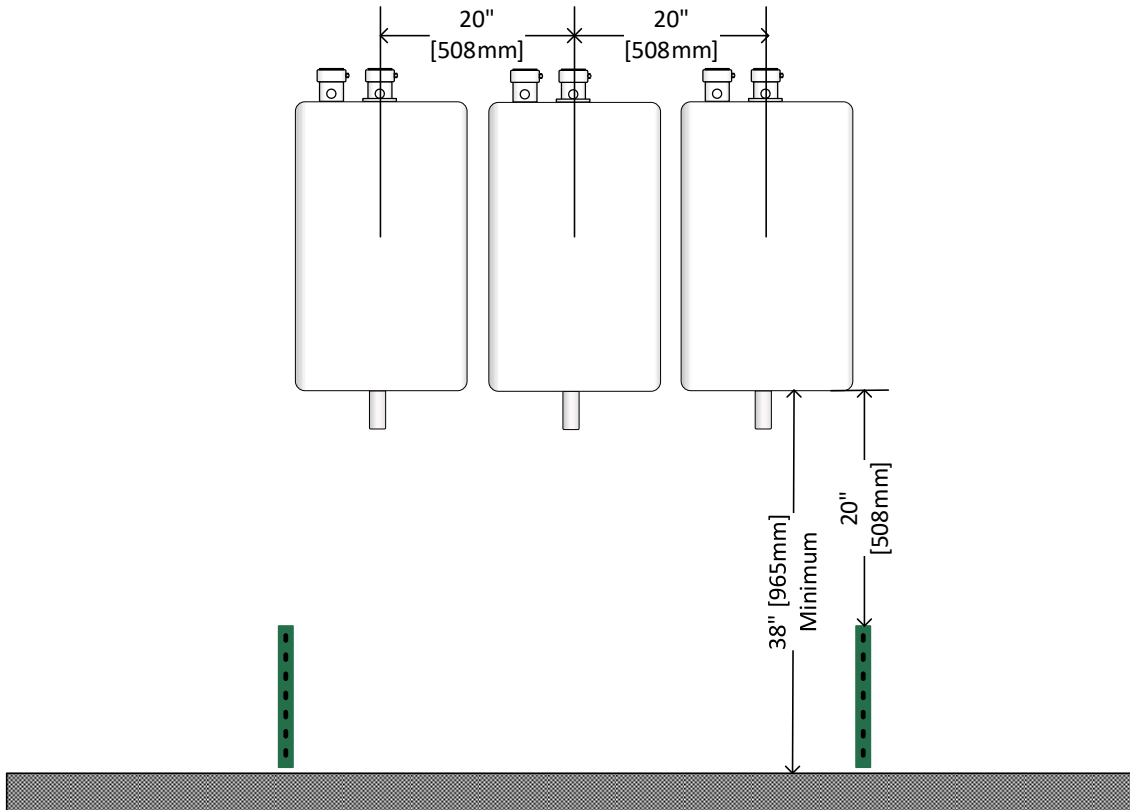


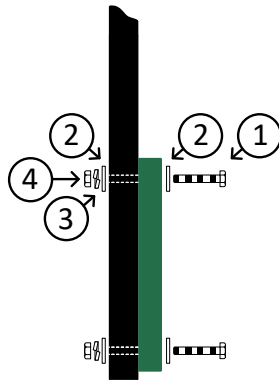
Figure 3: Wall Mounting Dimensions

⚠ WARNING

DO NOT MOUNT THE UNIT TO A HOLLOW SHEET ROCK WALL USING ANCHORS. The Tankless Water Heater must be bolted to wall studs or a solid wall structure.

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3. Mount the 1-5/8" x 1-5/8" x 18" Mounting Struts to the Modular Rack or a wall. When connecting two manifolds together, a third Mounting Strut must be mounted near the center of the manifold system.
 - a. Bolt the Mounting Struts to the Modular Rack using the included hardware as shown in Figure 4.
 - b. When mounting to a wall, the top of the Mounting Struts should be approximately 20" [508mm] below the Tankless Water Heaters to ensure the flexible hoses will reach the units. Mounting Struts must be bolted to wall studs or a solid wall using appropriate field supplied hardware.



Item	Description
1	3/8-16 x 3 Bolt
2	3/8 Flat Washer
3	3/8 Lock Washer
4	3/8 Nut

Figure 4: Bolting Mounting Strut to Modular Rack

⚠ WARNING

DO NOT MOUNT THE MOUNTING STRUTS TO A HOLLOW SHEET ROCK WALL USING ANCHORS. The Mounting Struts must be bolted to wall studs or a solid wall structure.

4. Mount the Gas Header near the bottom of the Mounting Struts as shown in Figure 5 using the 1-7/8" Strut Clamps. Ensure the LEFT END label is on the left side. Tankless Water Heater Systems consisting of greater than four units will require two Gas Headers be connected together with the supplied 1-1/2" Cast Iron Union using thread sealant approved for natural gas/propane.
5. Mount the Cold Water Manifold 6" [152mm] above the Gas Header as shown in Figure 5 using the 2-1/8" Strut Clamps. Ensure the LEFT END label is on the left side. Tankless Water Heater Systems consisting of greater than four units will require two Cold Water Manifolds be sweated together with the supplied 2" Copper Coupling.
6. Mount the Hot Water Manifold 6" [152mm] above the Cold Water Manifold as shown in Figure 5 using the 2-1/8" Strut Clamps. Ensure the LEFT END label is on the left side. Tankless Water Heater Systems consisting of greater than four units will require two Hot Water Manifolds be sweated together with the supplied 2" Copper Coupling.

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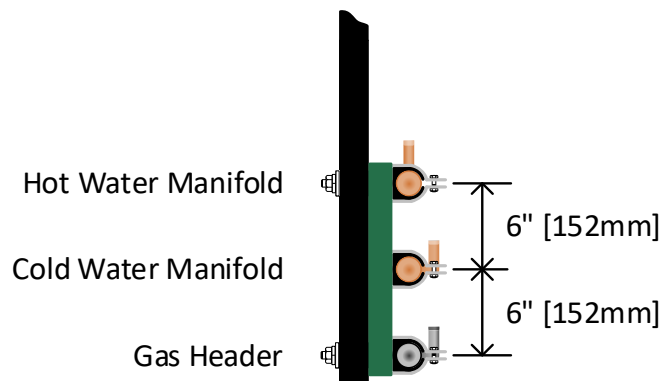


Figure 5: Gas Header and Water Manifold Installation Clearances

⚠ WARNING

Use two wrenches while tightening gas and water connections onto the tankless water heater. Failure to support the tankless water heater fitting with a second wrench while tightening gas and water connections may lead to tankless water heater damage.

7. Install a Tankless Water Heater Valve Kit on each tankless water heaters cold water inlet and hot water outlet using as outlined in the included instructions.
8. Install a Flexible Gas Line Female Adapter on each tankless water heaters gas inlet and a Male Adapter on each gas header shutoff valve using thread sealant approved for natural gas/propane. Install a Flexible Gas Line between each tankless water heaters gas inlet and the gas header.
9. Install a $\frac{3}{4}$ " x $\frac{3}{4}$ " Male Adapter on each tankless water heaters cold water valve with thread sealant. Install a 24" Stainless Steel Flexible Water Line between each tankless water heaters cold water inlet and the cold water manifold. Do not over tighten as the seal is made by the gasket.
10. Install a $\frac{3}{4}$ " x $\frac{3}{4}$ " Male Adapter on each tankless water heaters hot water valve with thread sealant. Install an 18" Stainless Steel Flexible Water Line between each tankless water heaters hot water outlet and the hot water manifold. Do not over tighten as the seal is made by the gasket.
11. Install the 1-1/2" Cast Iron Union on the end of the gas header which will be connected to the gas supply and the 1-1/2" Cast Iron Cap on the other end of the gas header using thread sealant approved for natural gas/propane.
12. Sweat a 2" Copper Coupling on the ends of the hot and cold water manifolds which will be connected to the buildings hot and cold water pipes. Sweat the 2" Copper Cap on the other end of the hot and cold water manifolds.