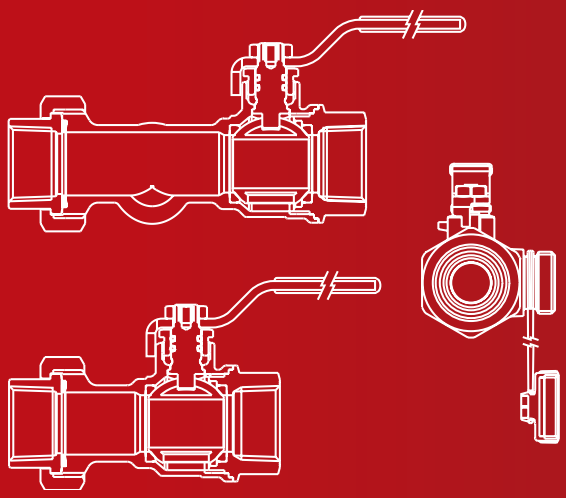
INSTALLATION, OPERATION, & MAINTENANCE GUIDE

LEAD FREE BALL VALVES

Tankless Water Heater Kits, Threaded, Press, or Solder Connection



MODELS

TWV-3W-KIT-G

TWV-3W-KIT-G-1

IMPORTANT

For safe and proper operation, please read the enclosed installation, operation, and maintenance instructions prior to using any Jomar Valve product. Save this document for reference.

Only qualified personnel should undertake the procedures outlined in this document. Jomar Valve, its agents, representatives, and employees assume no liability for the use of these procedures. These procedures are offered as suggestions only.

Note that failure to follow the enclosed instructions may damage the product and/or void any applicable warranties.

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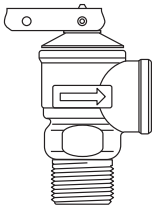
Lead Free Ball Valves

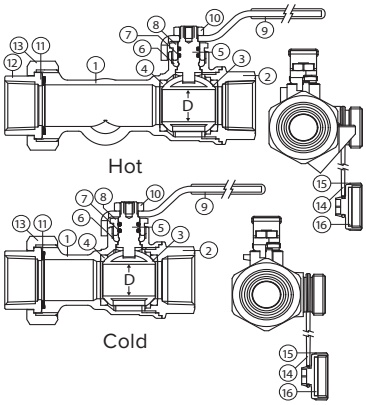
Tankless Water Heater Kit, 3-Way Ball, Threaded, Press, or Solder Connection, 600 WOG

Models: TWV-3W-KIT-G, TWV-3W-KIT-G-1

**PRV



**PRV



INSTALLATION

1. Remove union nut and tail pieces from the hot and cold water valves, indicated by red and blue handles respectively.
2. Install the union tail piece and nut onto the male threads of the water heater for both, hot and cold water valves. Use PTFE tape or other type of approved thread sealant, but do not use both.

**3. Thread the Pressure Relief Valve (PRV) into the relief port of the hot valve. Use PTFE tape or other type of approved thread sealant, but do not use both. Be sure that the orientation of the PRV discharge terminates in a position that is compatible with your plumbing and drain system.

**4. Do not reduce the diameter of the PRV drain line.

**5. Do not add any valves into the PRV drain line.

**6. Do not restrict discharge flow of the PRV drain line.

**7. Select a PRV drain line material that is rated to at least 180°F.

8. Place the union gasket flush in the inlay of the hot valve, and thread the body and union together. Tighten the union nut to approximately 15 ft-lbs of torque. Be sure that the drain is facing in a direction that is accessible for maintenance procedures.
9. Repeat step 8 for the cold water valve.
10. Connect your cold water supply into the bottom of the cold water valve (blue handle). *See connection options below.
11. Attach your downstream hot water piping system into the bottom of the hot water valve (red handle). *See connection options below.

Threaded Connection

Be sure to connect the hot and cold valves into the correct direction of water flow for the piping system. Use PTFE tape or an approved thread sealant for the threaded connections. Do not use both in conjunction with one another. Thread your water system into the bottom of the hot and cold valves.

Solder Connection

Be sure to connect the hot and cold valves into the correct direction of water flow for the piping system. Make sure that the connection faces are clean and dry. Square-off and de-burr the solder ends of the copper tubing. Pre-heat the solder end of the copper tubing prior to applying heat to the end connection of either valve. With the valves in the fully-open position, insert the copper tubing into the end connection until it reaches the fully seated position. Apply even heat to the end connection of the valve, facing outward from the center of the valve body. Allow solder to flow into the connection until there is a bead encompassing the interface with the copper tubing. **CAUTION:** Overheating the valve body can damage the seats and lead to failure. Take measures to limit the heat exposure in the valve body to 300°F maximum to protect against damaging the seats.

Press Connection

Be sure to connect the hot and cold valves into the correct direction of water flow for the piping system. Square off and de-burr the ends of the copper tubing that will be placed in the press fit connection. Insert the copper tubing into the press fit connection, being careful not to damage the O-ring as the tubing passes through. Once the tubing is at the seated position and in-line with the valve, crimp the press fit ring. Be sure that the crimping tool and jaw are properly sized for the application.

MATERIALS - TANKLESS WATER HEATER VALVE

No.	Part	Material
1	Body	Lead Free Brass - C27453
2	End Connection	Lead Free Brass - C27453
3	Ball	T.E.A. Coated Brass - C28500
4	Seat (2)	PTFE
5	Stem	Lead Free Brass - C28500
6	Packing	PTFE
7	Stem O-ring (2)	FKM
8	Packing Gland	Brass - C38500
9	Handle	Steel - Geomet® Plated
10	Handle Nut	Steel - Geomet® Plated
11	Union Washer	EPDM
12	Tail Piece	Lead Free Brass - C28500
13	Union Nut	Brass - C37700
14	Tether	PVC
15	Cap	Lead Free Brass - C28500
16	Flat Washer	Buna-N

****MATERIALS - PRESSURE RELIEF VALVE**

No.	Part	Material
1	Body	Bronze
2	Internal Parts	Brass and Stainless Steel
3	Seat Disc	Silicone
4	Pressure Spring	Stainless Steel

OPERATION

The hot and cold valves should be in the open position during normal operation. The handles will be in-line with the valve body. Drain caps should be on snugly, with rubber gaskets in the bottom. The PRV lever should be in the down position. The hot and cold valves will be closed into the drain position, only for maintenance procedures. The handles will be at 90° to the direction of water flow when in the drain position.

****Disregard if your model does not contain a PRV**

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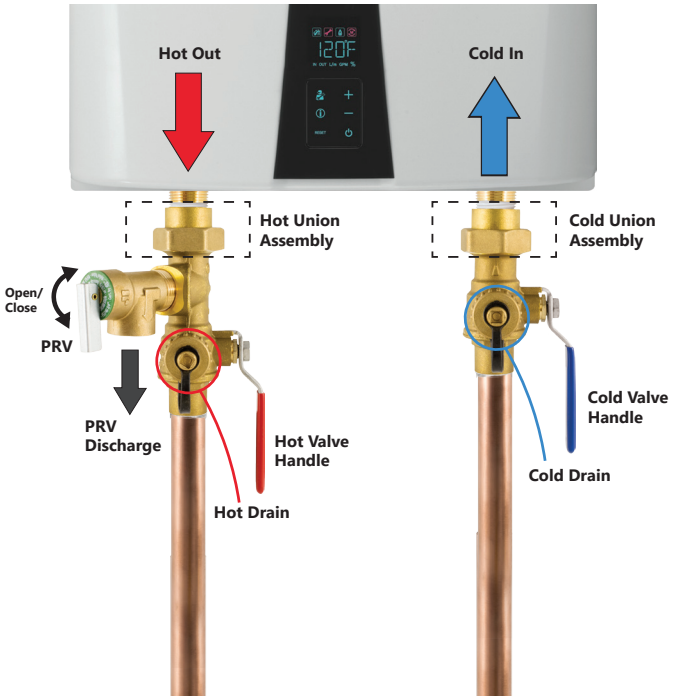
MAINTENANCE

Follow your tankless water heater guide for recommendations for maintenance of your system. In order to flush your system you will need a pump, 3 hoses, flushing solution, and a containment vessel. Perform the following steps to flush the system:

1. Disconnect power and gas from your system.
2. With the valves in the open position, remove the drain caps and attached hoses. Run hoses to containment vessel.
3. Rotate both main valves into the drain position (handles at 90°). Allow water to drain from the tankless unit into containment vessel. Once the tankless unit is empty, discard water down nearest drain.
4. Connect the pumps discharge port to the cold side hose. Connect the last hose to the pumps inlet and run to containment vessel.
5. With your flushing solution in your containment vessel, turn pump on and allow flushing solution to cycle for at least 30 minutes. Check recommendation from you water heater manufacturer.
6. Turn off pump and allow solution to drain back to the containment vessel. If the pump has an internal check valve, the hose connected to the discharge port should be removed and routed directly to the containment vessel. Discard solution in accordance with solution manufactures recommendations.
7. Return the cold water valve to the open position to allow supply water to flow through your tankless unit. Run at least 20 gallons of water through the system. This will still empty into your containment vessel via the hot side drain port. Discard water down nearest drain.
8. Return the hot water valve to the open position.
9. Remove hose and replace cap for the cold water drain. Be sure that the rubber gasket is in the bottom of the drain cap.
10. Remove hose and replace cap for the hot water drain. Be sure that the rubber gasket is in the bottom of the drain cap.
11. Reconnect power and gas.

The PRV should be cycled at least once a year, and each time the system is flushed



⚠ WARNING:

Do not place your Tankless Water Heater Kit in areas with potential exposure to freezing temperature conditions. Exposure to freezing conditions can cause valves to crack. When removing drain caps and cycling the PRV, keep in mind that this is a hot water system and may be under pressure. Apply proper safety measures to prevent contact with potentially scalding water. Allow pressure to deplete before fully removing drain caps. Do not rely on drain caps to stop water flow.

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