

Tankless Water Heater Installation Kit

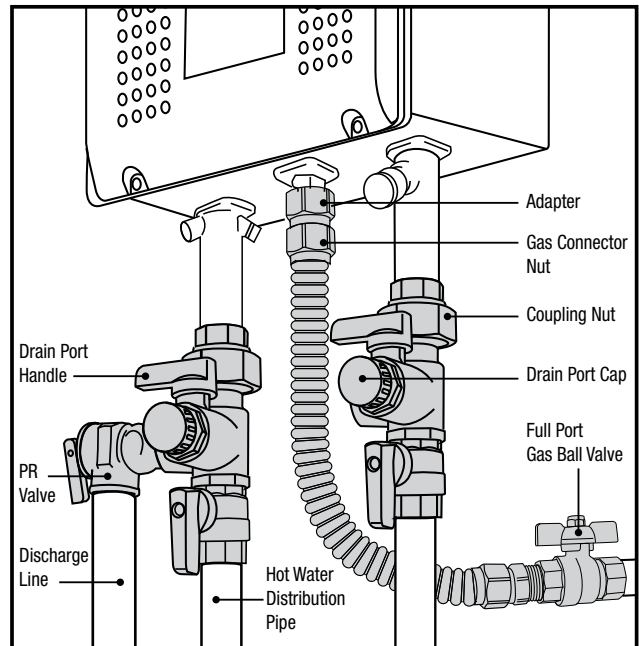
INSTALLATION INSTRUCTIONS

As the world leader in gas and water products, BrassCraft's tankless water heater installation kits simplify the appliance installation with fewer connections and a clean, professional finish. Featuring independent, 1/4 turn water control, BrassCraft service valves make it simple to service & test the appliance. When it comes to mastering a professional installation with high quality components, BrassCraft is the hottest name in tankless water heater installations.

- ▲ **WARNING:** Read all instructions & precautions before beginning installation
 - ▲ **WARNING:** Follow all installation instructions of the tankless water heater manufacturer when installing servicing the water heater and its connections.
 - ▲ **WARNING:** Expansion tank is required if a backflow preventer is installed upstream of the tankless water heater.
- Check with your local and state inspection office for applicable code requirements. Installation may require a permit & inspection.

Installing the Hot/Cold Service Valves and Pressure Relief Valve (PR Valve):

1. Turn off water supply at shut-off valve near appliance location. In absence of valve near appliance, water MUST be shut off at main valve, near the meter.
 2. Remove the coupling nut from the hot service valve body (red handles).
 3. Clean all male and female pipe threads with a wire brush and rag to ensure connections are free of any debris such as metal shavings, rust, dirt, oil or water.
 4. Apply pipe thread tape or sealant (as shown) to all male pipe threads of connection.
 5. Thread the coupling nut onto the outlet of the tankless water heater, wrench tighten.
 6. Thread the outlet of the hot service valve body onto the hot water distribution pipe, wrench tighten.
 7. Thread the body of the hot water service valve into the coupling nut, wrench tighten.
 8. Verify that the drain port cap is tight, and that the drain port handle is in the closed position (pointing 90 degrees from the outlet as shown).
 9. Then thread the PR valve into the open port provided on the side of the hot service valve. Be sure that the outlet of the PR valve points down.
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- ▲ **WARNING:** Do not install a manually operated shut-off valve before or after the PR valve; doing so may cause the system to over-pressurize & fail which may result in property damage, personal injury and/or death.
10. Thread a 3/4" discharge line (drain line) to the outlet of PR valve. The line must discharge within 6" of an approved location or drain. A discharge line may NOT be directly connected to a sewer line. In addition, a reducing coupling or other restriction is NOT permitted. End of line must be plain, not threaded.
- ▲ **WARNING:** Discharge line must be allowed to drain dry to ensure that no water can pool and freeze; frozen water near valve outlet will interfere with valve operation which may result in property damage, personal injury and/or death.
 - ▲ **WARNING:** Discharge line must be directed so hot water cannot splash on equipment or persons in vicinity if valve discharges which may result in property damage, personal injury and/or death.



11. Repeat installation for the cold service valve (blue handles) in the same manner as above (with exception that no PR valve is required).

Installing the Gas Connector (and Gas Ball Valve):

- ▲ **WARNING:** Gases can be ignited by a flame or spark causing a fire or explosion which may result in property damage, personal injury and/or death. Remove all sources of ignition (matches, candles, open flames, etc) before beginning installation. Follow installation instructions carefully.
- ▲ **WARNING:** To reduce the risk of gas leaks:
 - DO NOT reuse connectors, fittings and valves; they are designed for use on original installation only. Removal of connector and additional handling may damage connector making it unsafe for reuse.
 - DO NOT use this connector if it has been in a fire. Fire can damage the connector making it unsafe for use.
 - DO NOT join this connector to another connector.
 - DO NOT connect gas connector nuts directly to pipe threads of gas supply pipe or appliance. Install connector using the fittings provided.

NOTICE: Fuel gas codes require installation of a gas ball valve in the same room, within easy reach of the appliance (i.e. within 6 feet).

1. Turn off gas supply at gas ball valve near appliance location. In absence of a valve near appliance, gas MUST be shut off at main valve, near the meter.
 2. Clean all male and female pipe threads with a wire brush and rag to ensure connections are free of any debris such as metal shavings, rust, dirt, oil or water.
 3. Apply pipe thread sealant or yellow gas thread tape to the male pipe threads of connection.
- ▲ **WARNING:** DO NOT apply sealant or tape to flared ends of adapter fittings. Sealant and tape will prevent this connection from sealing properly which may result in a gas leak.
4. If necessary, thread new gas ball valve onto gas supply pipe, wrench tighten.
 5. Thread adapter fitting into gas ball valve and other adapter fitting onto appliance gas inlet.
 6. Thread gas connector nuts onto adapter fittings. Wrench tighten all connections.
- ▲ **WARNING:** To reduce the risk of gas leaks:

▲ DO NOT stretch the connector to make it fit. Connector must be long enough to allow the appliance to be positioned at its farthest anticipated connected distance from the gas supply without stretching, twisting or bending smaller than a 1-1/2" internal diameter (diameter of a golf ball).

- DO NOT trap connector against sharp edges or corners.
- DO NOT kink, twist or bend connector sharply.

Gas and Water Leak Testing:

▲ **WARNING:** Gases can be ignited by a flame or spark may result in property damage, personal injury and/or death. To reduce the risk of a fire or explosion:

- DO NOT TURN ON THE TANKLESS WATER HEATER until all connections have been leak tested.
 - DO NOT USE matches, candles, open flames or other sources of ignition to leak test gas connections!
 - DO NOT USE motorized equipment or other sources of combustion to dissipate gas vapors. If needed, open windows or doors to allow area to ventilate.
1. To purge the air (bleed) from the water lines, turn on a first and second floor faucet (highest point), then turn on water supply. Valve should be in full open position to ensure that the water heater operates properly. When water flows smoothly without sputtering, system is purged and faucets may be shut off.
 2. Then purge the air from the gas lines by turning the gas supply on first, then turn on a gas appliance, such as a stove or dryer. Gas appliance operation will purge air from system. NOTICE: DO NOT TURN ON THE TANKLESS WATER HEATER until you have bled the water & gas lines and leak tested the connections.
 3. Test all gas connections with leak test solution, or with clear soap and water solution; bubbles will indicate a leak. If a leak is detected, turn off gas supply before further tightening connections then retest. Water rinse and towel dry connector once test is complete.
 4. Wait at least 10 minutes to allow time for any vapors to dissipate. If leak test confirms connections do not leak gas, and you do not smell any gas, THEN light pilot(s) and turn on water heater.
- ▲ **WARNING:** Liquefied petroleum (L.P.) gases are heavier than air and dissipate slower than natural or manufactured gases. Wait an additional 10 minutes to allow time for any vapors to dissipate.

Diagnostic Testing & Repairs:

Diagnostic testing on the tankless water heater can be performed using the drain valve featured on the service valves. Please refer to the water heater's owners manual for manufacturer's specific testing instructions and recommendations.

▲ **WARNING:** Before removing test cap from the side-port drain valve make sure that the handle is in the closed position (pointing 90 degrees from the outlet as shown). Failure to close valve may result in severe burns and/or other personal injury.

Parts Listing & Ratings:

Tankless Water Heater Service Valves (TWW30 / TWW30R)

600 WOG

Operating Pressure: 125 psi

Operating Temperature: 40°F to 180°F

3/4" ID Gas Connectors

(included w/ TK30RB21-18 & TK30RB21-24 Tankless Water Heater Kits)

Btu Rating: 290,900

Operating Pressure: 1/2 psi maximum

Operating Temperature: -40°F to 150°F

3/4" Full-Port Gas Ball Valve

(included w/ TK30RB21-18G3 & TK30RB21-24G3 Tankless Water Heater Kits)

425 WOG

ASME B16.44: Pressure up to 5 psi; Ambient temps 32°F to 125°F

ANSI Z21.15-CSA 9.1 Pressure 1/2 psi maximum; temps 32°F to 125°F

CSA Req. CR91-002: Pressures up to 2-5 psi; temps -40°F to 125°F