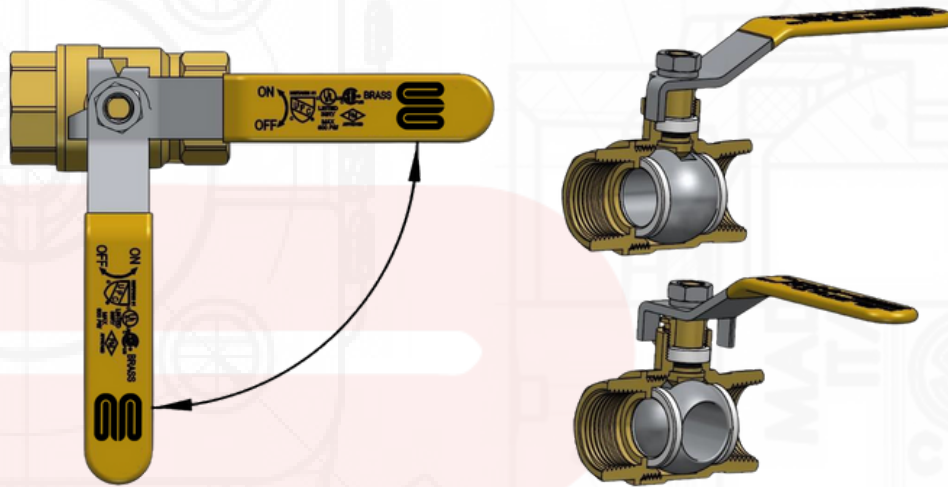


# INSTALLING A THREADED BALL VALVE

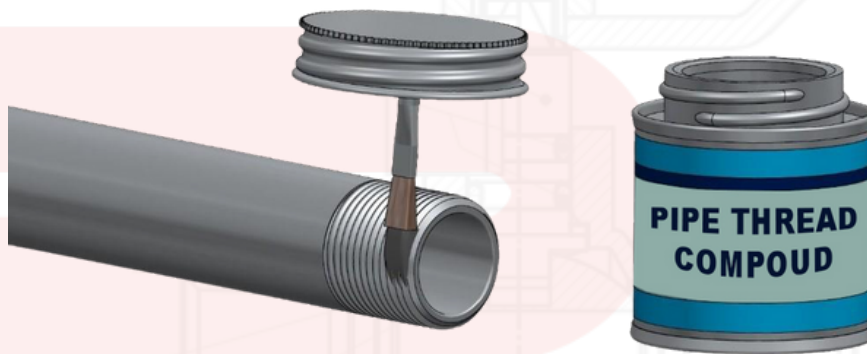
## INSTRUCTIONS

### INSTALLATION STEPS:

- 1) Check the ball valve ports, seating surfaces, and threads to confirm they are clean and free from any debris.



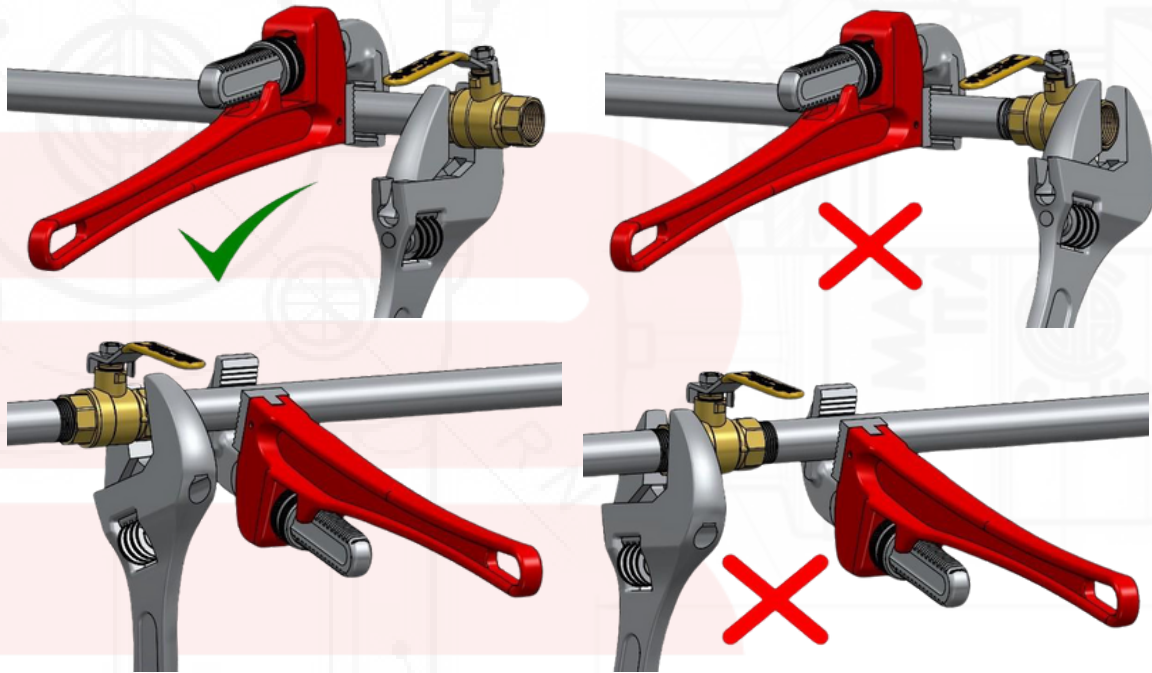
- 2) Switch the valve from the fully open position to the fully closed position.
- 3) Verify that the threaded pipe connections intended for the valve are properly threaded, clean, and free from any foreign material or metal shavings.
- 4) Use a high-quality pipe thread sealing compound or PTFE thread sealing tape, following the manufacturer's application guidelines, to ensure a secure and leak-free pipe joint seal.



- 5) Align and support the valve and piping to prevent cross-threading, ensuring the male threaded fitting is properly aligned with the axis of the tapped hole. Maintaining correct pipe support and alignment both during and after assembly helps prevent unnecessary stress on the valve body from the piping.

6) When installing two-piece body ball valves, always use two wrenches to assemble pipe joints. Place one wrench on the valve end nearest to the pipe joint being tightened and the other on the pipe itself to prevent torque from being transferred through the valve body joint between the body and tailpiece. This helps avoid distortion of internal valve components

**WARNING:**  
**FAILURE TO FOLLOW THIS PROCEDURE CAN STRESS THE BODY JOINT AND MAY CAUSE LEAKS AT THE JOINT.**



**TIP:** Brass and bronze alloys are softer than steel, so always use a smooth-jawed wrench on the valve end and rotate the valve onto the pipe. Pipe wrenches should be used only on pipes and fittings.

7) Tighten the joint until you feel it beginning to seat and the fitting is nearly aligned in the desired direction. Gradually increase the tightening force, and if each attempt results in less movement, continue tightening until proper alignment is achieved for a secure joint. If the movement stops abruptly, the fitting has likely bottomed out against the stop in the valve body.

**CAUTION:** Never loosen a connection to adjust alignment. Backing off valve, pipe, or fitting connections can compromise the seal's integrity, leading to leaks and potential failure.

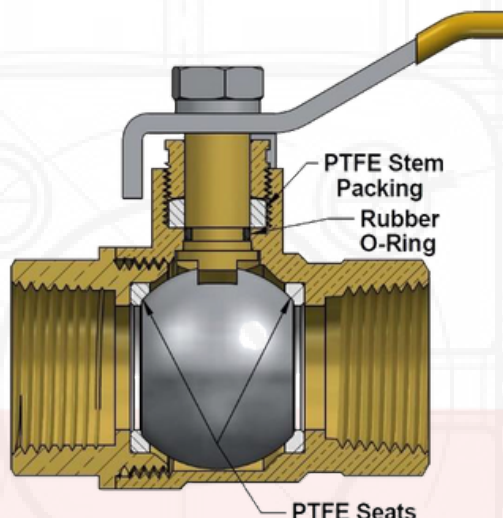
**WARNING:**

Avoid over-tightening the valve onto the pipe, as this can distort internal components or cause stress fractures in the valve body. As a guideline, after hand-tight engagement:

- For sizes up to 1": tighten an additional 1-½ to 3 turns
- For sizes 1-¼" and larger: tighten 1 to 2-½ turns

Ensure 3-½ to 6 threads are engaged. Deviation from this range may indicate improper tightening or out-of-tolerance threads. With experience, you'll recognize the right tightening force to prevent damage to the fitting or valve.

## SYSTEM DESIGN



Ensuring the appropriate approvals, certifications, pressure and temperature ratings, and compatibility of valve materials—including the body, trim, seats, and seals—is the sole responsibility of the system designer.

Valves should be installed in piping systems that meet the relevant ASME B31 standards.

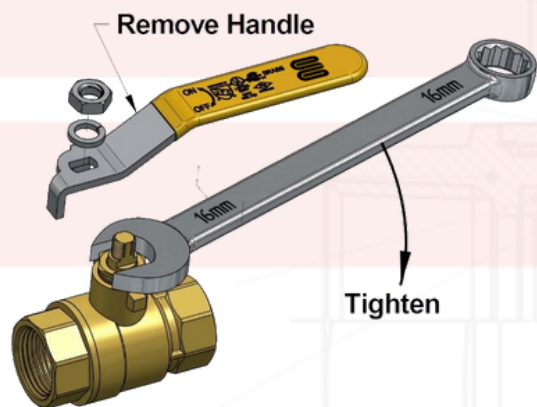
Special attention may be needed for pipeline and media expansion and contraction within the system.

## OPERATION

The valve handle is marked to indicate the proper rotation for “ON” and “OFF” positions—clockwise for “OFF” (closed) and counterclockwise for “ON” (open). Flow can be controlled by adjusting the lever between 0° and 90°. However, keeping the valve partially open may expose the PTFE seats to deformation due to uneven pressure. A key benefit of quarter-turn ball valves is their quick operation, but this also increases the risk of water hammer. To minimize this risk, always turn the lever slowly.

## INSPECTION & MAINTENANCE

1) Aside from periodically cycling the valve between open and closed positions, no inspection or preventative maintenance is necessary.



2) Normal stem packing wear can be adjusted by gradually tightening the packing nut. Turn the nut clockwise in 1/8-turn increments until any leakage stops. Avoid over-tightening, as this can increase operating torque and accelerate packing wear.

3) Never repack valves while under pressure. Repair or replacement of internal components in two-piece ball valves is not advised, as disassembly may damage the body or tailpiece, rendering the valve inoperable.