# **IO&M Guide** 2-Piece Ball Valve • Threaded & Solder Connections



## Installation:

- Operate valve prior to installing; be sure that the travel-stops allow full operating range-of-motion between the open and closed positions.
- Threaded and solder ball valves are bi-directional and can generally be installed in whichever orientation is practical for the piping system, regardless of flow direction.
- Valves must be rated for their intended use, media, temperature, and pressure.
- Protect valves from extreme hot/cold/corrosive environments, which could damage the valve and lead to failure.
- Installation should be performed by qualified personnel, and adhere to all applicable codes and standards.

<u>Threaded Valves:</u> Remove any debris from the thread connection faces. Apply a thread sealant to the male connection threads. Using two wrenches between the pipe and near side of the valve, apply torque until the threads have made a seal and the valve orientation is proper.

- Do not back-off the threads to re-align orientation.
- Do not use thread sealant in conjunction with PTFE tape.
- Be sure that thread types are compatible.

**Solder Valves:** Be sure connection faces are clean and dry. Pre-heat the solder end of the copper tubing prior to applying heat to the end connection of the valve. With the valve 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, facing outward from the center of the valve body. Allow solder to flow into the connection until there is a bead fully encompassing the interface with the copper tubing. Allow the valve to cool before repeating the process for the opposite side of the valve.

• 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.

### **Operation:**

Rotate the valve handle in the direction indicated for open or close. Applying excessive force or impact in order to open/close the valve can result in damage to the valve, and can lead to failure.

### Maintenance:

It is recommended that valves be inspected and physically operated between the open and closed position at least 6 times per year; when the piping system allows. This will help to reduce build-up and corrosion on the interior of the valve. Inspect for signs of leakage or body damage, and make repairs as soon as the piping system allows. Leaks occurring at the valve stem can often be sealed by tightening the packing nut. If handles become damaged, they can be replaced by removing the handle nut. Be sure to use replacement handles that are compatible with the valve's stem and hard-stops.





### **Material Specifications (Standard 2-Piece Ball Valve)**

Part
Body
End Connection
Ball
Seat (2)
Stem
Packing
Stem O-ring
Packing Gland
Handle
Handle Nut

Component materials and arrangements may vary

