



## WATER GAUGE & GAUGE GLASS INSTALLATION & MAINTENANCE GUIDE (20, 21, 22, 23, 24, 25 Series)

### INSTALLATION

Only properly trained personnel should install and maintain water gauge glass and connections. Remember to wear safety gloves and glasses during installation. Before installing, make sure all parts are free of chips and debris.

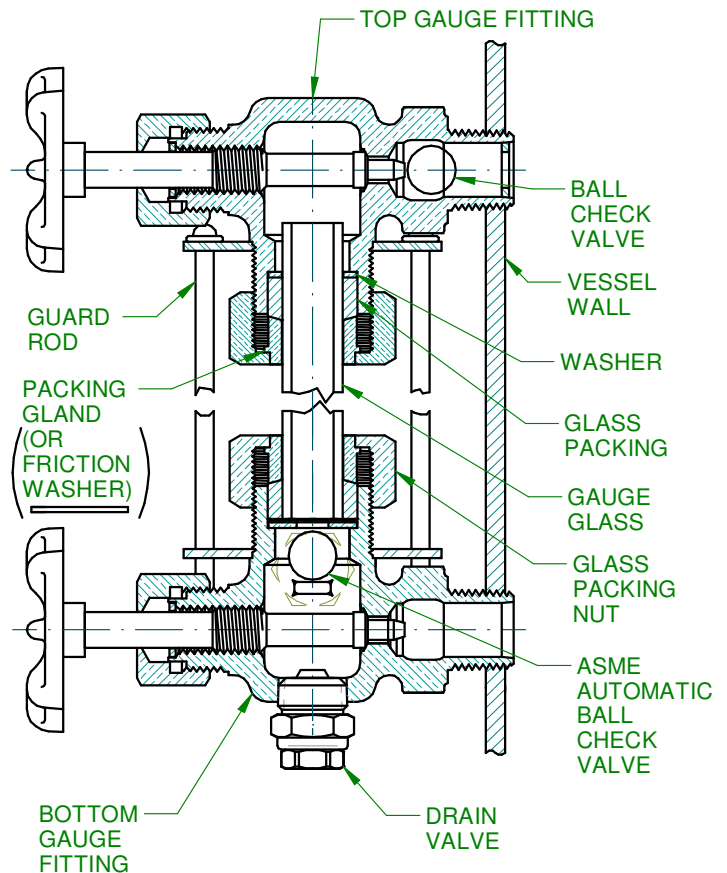
1. Read all warnings and instructions before performing installation or maintenance.
2. Apply thread sealant or tape to pipe threads. Install top gauge fitting (fitting without a drain valve) into the uppermost tapping, wrench tighten the getting until it is snug and the glass outlet is pointing at five o'clock (about 1/8 turn from its final downward vertical position).
3. Install the bottom gauge fitting (the fitting with a drain valve until it is snug and the glass outlet is pointing directly upward.
4. Remove glass packing nut, friction washer (or packing gland, depending on the model), and glass packing from each gauge fitting. Slide the packing nut, then friction washer or packing gland and then glass packing onto each end of glass.
5. Gently insert one end of the glass into the top gauge fitting. Keeping the glass inside the top fitting, gently rotate the top gauge fitting clockwise until vertically aligned with the bottom gauge fitting, then insert glass into bottom fitting until glass bottoms out on the shoulder inside the bottom fitting.
6. Carefully raise glass about 1/16" and slide lower glass packing down until the glass packing contacts the lower gauge fitting. **DO NOT** allow the glass to remain in contact with any metal!
7. Carefully slide upper glass packing up as far as possible.

8. Tighten (by hand) both glass packing nuts and then tighten 1/2 turn more by wrench. Tighten only enough to prevent leakage. **DO NOT OVER TIGHTEN!** If any leakage should occur, tighten slightly, a quarter turn at a time, checking for leakage after each turn.

**WARNING:**

**VALVE MUST BE USED IN THE FULLY OPEN POSITION FOR PROPER OPERATION OF BALL CHECK. FAILURE TO DO SO COULD RESULT IN BODILY INJURY AND/OR PROPERTY DAMAGE.**

**NOTE: NOT ALL WATER GAUGES ARE EQUIPPED WITH BALL CHECKS.**



**WARNING:**

**SAFETY GLASSES AND GLOVES SHOULD BE WORN AT ALL TIMES WHEN WORKING WITH OR EXAMINING WATER GAUGE GLASS AND CONNECTIONS.**

**IMPROPER INSTALLATION OR MAINTENANCE OF GAUGE GLASS AND CONNECTIONS CAN CAUSE IMMEDIATE OR DELAYED BREAKAGE RESULTING IN BODILY INJURY AND/OR PROPERTY DAMAGE.**



**CALIFORNIA PROP 65: WARNING:** Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

**FOR NON-LEAD FREE VALVES:** It is illegal to use this product in the United States for potable water services (water intended for human consumption).

**FOR LEAD FREE VALVES:** This product complies with U.S. Safe Drinking Water Act (SDWA). Suitable for potable water applications intended for human consumption.

**WATER GAUGE GLASS RECOMMENDATIONS**

**MAINTENANCE**

Examine the gauge glass regularly for any signs of clouding, scratching, erosion, or corrosion. The glass should be inspected daily until the need for replacement becomes apparent. This will help establish the routine inspection and routine replacement schedules.

**CLEANING**

Use commercial non-abrasive glass cleaners to keep the glass clean. Use diluted acids such as Hydrochloric (muriatic) acid when regular cleaners do not seem to work. Do not use wire brushes or any other abrasive materials which could scratch the glass.

**INSPECTION**

Examine the surface of the glass for scratches, corrosion, chips, cracks, surface flaws, or nicks. To do this, shine a very bright concentrated light at an angle of about 45 degrees. A defective glass will glisten as the light strikes imperfections. Glass which appears cloudy or roughened, will not respond to cleaning, and should be replaced.

**STORAGE**

Keep gauge glass in original packaging until ready to install

**U.S. SAFE DRINKING WATER ACT WARNING:**

It is illegal to use products that contain lead for potable water services (Water intended for human consumption) in the United States.

**DO's**

- DO verify proper gauge has been supplied.
- DO examine gauge glass and packings carefully for damage before installation.
- DO install protective guards and utilize automatic ball checks where necessary to help prevent injury in case of glass breakage.
- DO inspect the gauge glass daily, keep maintenance records, and conduct routine replacements.
- Do protect glass from sudden changes in temperatures such as drafts, water spray, etc.

**DO NOT's**

- DO NOT use the glass if it contains any chips or any other visible signs of damage.
- DO NOT reuse any tubular glass or glass packings.
- DO NOT subject gauge glass to bending or torsional stresses.
- DO NOT over tighten glass packing nuts.
- DO NOT allow glass to touch any metal parts.
- DO NOT exceed the recommended pressure of the gauge or gauge glass.
- DO NOT clean the gauge or gauge glass while pressurized or in operation.

