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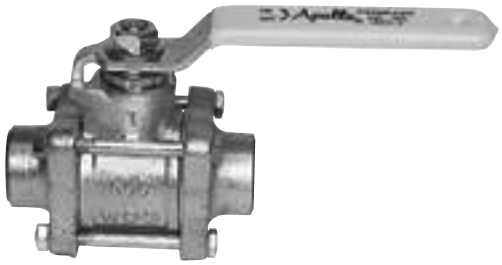
APOLLO®

INSTALLATION, OPERATION AND MAINTENANCE GUIDE

82-200 SERIES
83-200, 700 SERIES
85-200 SERIES
86-200, 700 SERIES
401-200 SERIES



CONBRACO
Ball Valve Division

P.O. BOX 125 PAGELAND, S.C. 29728 803-672-6161

****CAUTION****

BEFORE INSTALLATION: Ensure that the component materials of the valve being installed are compatible with the media, with regard to corrosiveness, pressure, and temperature.

INSTALLATION

NOTE: Valves must be installed in piping systems that comply with the applicable portions of ANSI B31 standard. Special considerations must be taken with respect to pipe line expansions and contractions and the media expansions and contractions within the piping system.

1. For Socket Weld & Butt Weld valves, tack weld valve in place.
2. Ensure that the valve is in the OPEN position. (Valve must be in the open position for removal of the body center section to allow the ball sphere to clear the end caps.)
3. Remove the body center section and set aside in a clean place.
4. Finish welding (or solder) the end caps in place. CAUTION: Overheating bronze end caps can cause permanent damage.
5. Check and clean faces of end caps of any welding splatters, scale or oxides.
6. Re-assemble the body center section (using the two additional new seats furnished) between the end caps. Replace the body bolt that was removed and hand tighten all four hex nuts.
7. Torque the hex nuts in 1/4-turn increments, using a crossed pattern, until the proper torque setting is reached. (Refer to Bolt Torque Chart)

NOTE: When bolts are properly torqued, the end caps will be flush against the body center section on both sides. Improper torque can warp the end caps, permanently damaging the unit.

OPERATION

The levers are marked showing proper rotation for “ON” and “OFF” positions. Rotation is clockwise for “OFF” and counterclockwise for “ON”.

MAINTENANCE

Normal stem packing wear can be compensated for by tightening the packing gland nut. If all adjustment to packing gland nut has been made, remove the lever and packing gland nut and add one or two replacement bearings on top of the old packing. Re-assemble the packing gland nut and lever. (Refer to illustration on last page.)

MAINTENANCE (cont'd)

If general repair of the valve is required, it is recommended that the entire body center section be replaced as a unit. This reduced down-time and permits the old unit to be rebuilt when more time is available. The rebuilt unit can then be retained for future use.

CAUTION: Do not disassemble valve while under pressure nor tieh entrapped hazardous gasses or fluids therein.

BODY CENTER SECTION REMOVAL IS AS FOLLOWS:

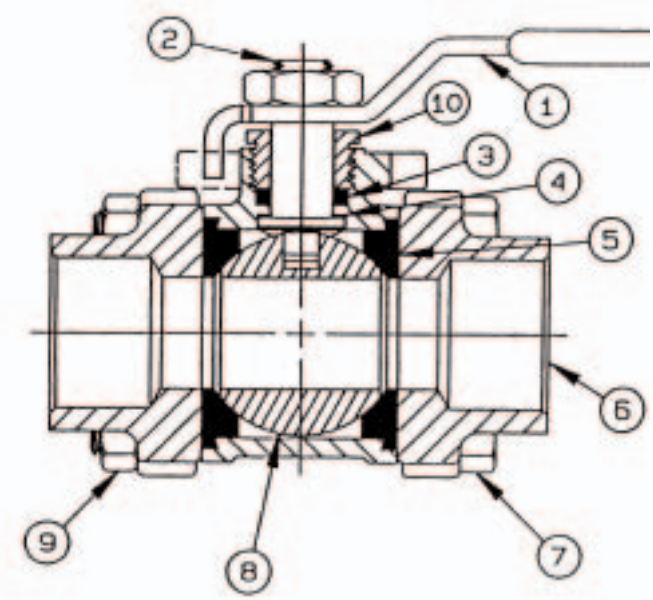
1. Same as Step 2 under "INSTALLATION".
2. Same as Step 3 under "INSTALLATION".
3. Replace with new or rebuilt body center section.
4. Same as Step 6 under "INSTALLATION".
5. Same as Step 7 under "INSTALLATION".

BOLT TORQUE CHARTS

82-200	Torque, In./Lbs.	83-200 83-700 86-200 86-700 402-200	85-200	Torque, In./Lbs.
3/8" to 1"	100	1/2" to 1"	1/2" to 1-1/4"	100
1-1/4" & 1-1/2"	150	1-1/4" & 1-1/2"	1-1/2" to 2"	150
2"	270	2"	N/A	270

NOTE: Torque valves given are for assembly of the valve ONLY and NOT for any external forces acting on the valve.

NOTE: ALWAYS TEST THE VALVE AND THE SYSTEM BEFORE PLACING THE SYSTEM INTO SERVICE.



GENERAL VALVE IDENTIIFCATON

1. Lever and grip assembly
2. Stem (Blow-out-proof type)
3. Stem packing
4. Stem bearing
5. Combination seat/body seal
6. End caps
7. Body bolts
8. Ball
9. Body bolt nuts
10. Packing gland nut