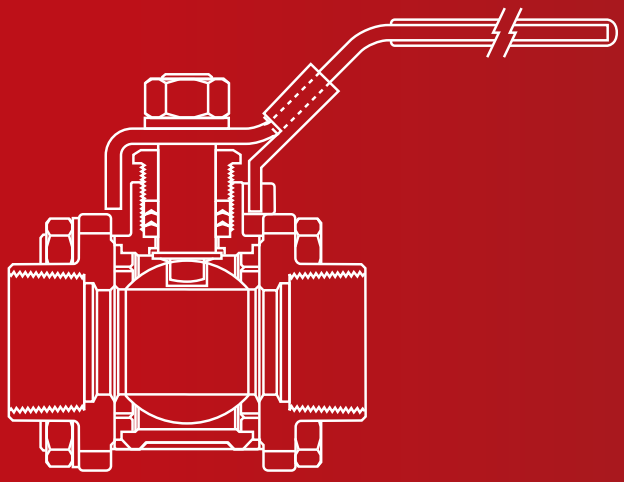
INSTALLATION, OPERATION, & MAINTENANCE GUIDE

CARBON STEEL & STAINLESS STEEL BALL VALVES

3 Piece 4 Bolt, 1000N, Threaded & Socket Weld Connection



MODELS

T-CS-1000N-SS-4B

S-CS-1000N-SS-4B

T-SS-1000N-4B

S-SS-1000N-4B

IMPORTANT

For safe and proper operation, please read the enclosed installation, operation, and maintenance instructions prior to using any Jomar Valve product. Save this document for reference.

Only qualified personnel should undertake the procedures outlined in this document. Jomar Valve, its agents, representatives, and employees assume no liability for the use of these procedures. These procedures are offered as suggestions only.

Note that failure to follow the enclosed instructions may damage the product and/or void any applicable warranties.

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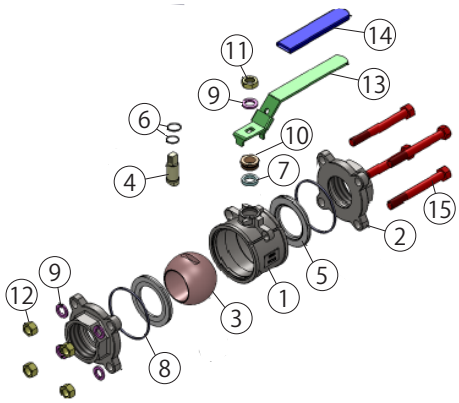
Carbon Steel & Stainless Steel Ball Valves

3 Piece 4 Bolt, Swing Out Body, Full Port, Threaded & Socket Weld Connection, Stainless Steel Trim, 1000 WOG

Models: T-CS-1000N-SS-4B, S-CS-1000N-SS-4B, T-SS-1000N-4B, S-SS-1000N-4B



INSTALLATION

Threaded Connection

1. The valve may be installed for flow in either direction. Use standard piping practices when installing valves with threaded parts. When tightening the valve to the pipe, apply the wrench to the end cap nearest the pipe being worked. Adjust packing prior to installation.
2. When installing the above valves, be sure that the threads on the mating pipe are free from excessive grit, dirt, or burrs.
3. Take care to assure that any pipe sealants used are not so excessively applied to the pipe threads that the valve seats, ball and/or cavity becomes fouled.

Socket Weld Connection

Only a qualified installer should weld, as outlined in Section IX of the ASME Boiler Constriction Code. For stainless steel valves, use E316L welding rod.

1. Turn the valve to the full open position.
2. Remove the handle or actuator.
3. Weld by applying a 1/8" weld 360° around each end cap.
   CAUTION: DO NOT heat the center section above 350°. Use a temperature stick and a wet cloth wrapped around the center section to prevent overheating.
4. After sufficient cooling of the valve, install the handle or actuator.

OPERATION

1. The valves shall be used in temperature ranges from 14°F to 320°F and shall not be used in an environment outside this range.
2. The valve's pressure ratings are cast on the valve body; user shall make sure the fluid pressure does not exceed the valve's rated pressure.
3. Any inappropriate operation may cause leakage or other problems; in case of emergency, you must release the fluid inside the pipeline and then follow procedures.
4. Operating torques shall not exceed the data shown on Torque table. Over-torquing can bend the stem, causing operational failure.

MAINTENANCE

Periodically observe the valve to be sure of proper performance. More frequent observation is recommended under extreme operating conditions. Routine maintenance consists of tightening the stem nut quarter-turn periodically to compensate for the wear caused by the stem's turning against the resilient stem packing seal.

MATERIALS

No.	Part
1	Body
2	Body Cap (2)
3	Ball
4	Stem
5	Seat (2)
6	Stem Seal
7	Stem Packing
8	Union Seal (2)
9	Spring Washer
10	Gland
11	Handle Nut
12	Cap Nut
13	Handle
14	Plastic
15	Cap Bolt (8)

TORQUE

Size	Cap Nut Torque	Maximum Operating Torque
1/4"	133	75
3/8"	133	75
1/2"	177	100
3/4"	177	85
1"	354	310
1-1/4"	354	400
1-1/2"	354	500
2"	561	600
2-1/2"	561	750
3"	918	975
4"	918	1160

DISASSEMBLY

NOTE: If complete disassembly becomes necessary, replacement of all seats and seals is recommended.

1. Unscrew the cap nut, remove the spring washer, cap bolt, and body cap.
2. Take out the seat, ball and union seal.
3. Remove the handle nut, spring washer, handle, and gland. Then press the stem from the top into the valve body and remove it through the body.
4. Remove the stem seal and stem packing from stem.

ASSEMBLY

NOTE: The following instructions are for in-line assembly. For bench assembly, it may be more convenient.

1. Air-blast the valve body. Insert the stem seal into the stem. Then insert the stem into the stem bore and up out the top of the valve.
2. Place a wrench through the body on the bottom of the stem blade to hold the stem stationary. Then, install the stem packing and gland into the stem and tighten the gland until snug.
3. Align the stem blade inside the valve body with the ball. Insert the ball and rotate the stem to the fully closed position.
4. Working at either end of the valve body, place a seat into the valve body. Push the seat snugly against the closed ball.
5. Place a union seal into the machined sealing groove of the body. Be certain the groove and seal are clean.
6. Repeat step 4 and 5 for assembly of the opposite end of the valve.
7. Turn the stem to the fully open position.
8. Swing the entire body assembly back into the properly aligned and interlocked position between the body caps, being careful not to scratch the union seals. The body caps may have to be spread slightly to accept the valve body.
9. Close the valve.
10. Bolt the valve together with cap bolts, spring washers, and cap nuts. Tighten the nuts evenly, alternating between them to the torque listed in Torque table.
11. Turn the ball one revolution at least once.
12. Place the handle, and spring washer and handle nut over the stem. Tighten the handle nut until snug.
13. Cycle the valve slowly twice to ensure permanent position of the ball between the two seats.

⚠ WARNING:

For your safety, it is important that the following precautions be taken prior to removal of the valve from the line or before any disassembly.

1. Wear any protective clothing or equipment normally required when working with the fluid involved.

2. De-pressurize the line and cycle the valve as follows:
   A. Place the valve in the open position and drain the line.
   B. Cycle the valve to relieve residual pressure in the body cavity before removing the valve from the line.
   C. After removal and before any disassembly, cycle the valve again several times.

3. This valve is not to be used for unstable gases, H_2SO_4, HF, HCl, and other dangerous fluids. If you have questions regarding the used fluid, please contact Jomar Valve at csr@jomar.com or 586.268.1220.

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