

ROLLING DOUBLE DISC GATE VALVE

SERIES 7000

OPERATION AND MAINTENANCE MANUAL

GENERAL

Consult AWWA C500 Standard for additional information .This manual is a recommendation to the customer for proper use and storage of gate valves. Valves should always be installed and operated by authorized personnel.

RECORDS

Records should be kept for each valve. This is an example of information that should be recorded by the end user.

1. **Model Number:** _____

2. **Manufacturer:** **J&S Valve, Inc.**
 2323 1st Street,
 Huffman, Texas 77336
 Email: sales@jandsvalve.com
 Website: www.jandsvalve.com
 Tel: 281-324-3990

3. **Valve ID Number(s):** _____

4. **Motor Information (supplier, model number, serial number, hp, voltage, speed, etc.):**

5. **Local Manufacturer's Representative for Valve and Motor:**

Name: _____

Address: _____

Email: _____ **Tel:** _____

INITIAL VALVE INSPECTION

Before signing the delivery receipt, valves should be inspected for damage before being removed from delivery vehicle.

Use proper rigging when lifting the valve. Use appropriate lifting equipment. Valves should **never** be lifted by the stem, hand wheel, 2" operating nut, gearing, electric motor operator, and/or bypass valve.

Perform the following checks before installing this valve:

- Visually check the valve for damage.
- Verify all fasteners are properly tightened.
- Verify direction of opening is correct with other valves in the system.
- Clean valve end-joints prior to installation
- Remove any contaminants that may cause water system impurity.
- Remove any objects that may cause the valve to not operate properly or seal tightly.
- Operate the valve by opening and closing the valve to make sure it operates properly.

When placing valves in trenchers, keep the valve closed and do not backfill until hydrostatic system is tested. Leave valves exposed while pipeline is being pressurized to check valve joints for leakage and check tightness of pressure containing bolting.

VALVE STORAGE

Outside Storage:

If indoor storage is not feasible, additional protection must be provided. Covering valves with a tarp will help protect the valves from weather, dirt and debris. This will also minimize exterior coating damage from the elements and will reduce fading and chalking due to exposure to the sun. The valves should also be placed in a location where they will not be damaged by collision from vehicles, lift trucks or falling items. Flanges should be vertical so that water does not stand on or between the discs in cold climates. **If water is allowed to freeze in the valve, severe damage to the valve components could result.** Valves should be stored in the closed position. Remove packaging for inspection of the valves. The packaging should be replaced prior to placing the valves in storage.

Inside Storage:

Metal seated gate valves should be stored inside whenever indoor storage is available. Metal seated gate valves should be stored in the fully closed position. To reduce the change of damage, the valves should be kept in the original crating. Covering valves with a tarp to mitigate damage from dirt and debris is recommended.

VALVE INSTALLATION

AWWA C500 and AWWA M44 have additional installation guidelines and information.

- Verify the orientation of the valve and gear prior to installation. Valves for horizontal installations in vertical pipelines must be installed with disc face tracking in the “down” location.
- Fasteners – loose fasteners must be tightened.
- Check the seating surfaces remove any foreign material to make sure they are clean and not damaged. Close the valve before installation.
- Clean all foreign material from the line such as cement, tools, sand, dirt, wire, etc.
- Move the valve carefully into position.
- Adequately support the valve to prevent strain on the line and/or valve.
- Valves should not be used to correct any error in alignment or spacing of piping.
- Installer must select and use the correct size and type of gasket.
- Bolting different types of flanges or materials of construction should be avoided unless the contractor and owner agree to this unconventional installation.
- Make sure any valve boxes do not transmit traffic load to the valve. Also make sure that the valve box is centered over the valve stem and that it is parallel to the valve stem.
- Valves installed at the end of the line must be restrained to prevent blow off.
- Verify there is adequate clearance around the valve after Installation.
- Protect the valve stem so debris does not get packed against the stem on buried valves. Allowing debris to get packed around the stem will create problems with operation.

AWWA C500 and AWWA M44 have additional installation guidelines and information.

VALVE OPERATION

START-UP PROCEDURES:

1. Open and close the valve before applying pressure. Record number of turns to open.
2. Note the direction of opening cast on the Operating Nut or Handwheel
3. Open and close valves slowly when under pressure to avoid damage from surge or water hammer.
4. Contact J&S Valve if there is difficulty opening and closing the valve. **Never over torque the valve to force it open or closed.**

SHUT DOWN:

1. Close the valve by turning in the proper direction based on indication on the operating nut or the handwheel.
2. Close the valve slowly against pressure to avoid damage from surge or water hammer.
3. Verify the valve is completely closed by counting number of turns as recorded during initial start-up.

Freezing Weather

In freezing temperatures suitable precautions need to be taken to avoid freeze damage.

TESTING PROCEDURE

- Leave pipeline joints exposed to permit checking for leaks at joints.
- Allow system to stabilize 24 hours prior to testing by filling it with water. Make sure all air has been vented from the pipeline and the valve. **Trapped air will cause a pressure drop during testing creating a false indication of leakage.**
- Raise pressure in 50 PSI increments to the desired test pressure. After each pressure increment, observe stability of the joints looking for gasket extrusion, joint movement, gasket movement and leaks.
- Seat leaks shall be evaluated per AWWA C500 allowable leakage requirements.

MAINTENANCE & INSPECTION

The valve should be inspected by opening and closing the valve after the pipeline is filled and pressurized. The valve should function freely with no binding or vibration. The number of turns should be counted in both the opening and closing direction. If ~~full~~ the closing turns do not match the opening turns, could be signs of an obstruction. Turns may differ from customer specified requirements. Job specific submittal documentation may show number of turns, however actual counted turns can vary slightly from the submittal due to variations of castings and due to machining tolerations. Refer to the actuator data sheet included with wiring diagrams for motor information. Attached actuators should be inspected per the manufacturer's recommendations provided with those unit. Contact J&S Valve for additional information.

- Check flange fasteners on a regular basis.
- Lubricate OS&Y stems with food-grade lubricant annually
- Inspect packing and O-Rings on a regular basis.
- Exercise the valve regularly by operating the valve from full open to full close at regular intervals. The service conditions will dictate how often valves should be exercised.
- Lubricate the valve stems of OS&Y valves with food grade anti-seize lubricant. Stems should be wiped clean of debris prior to operation.

-
- Valves with stem seal packing need to be checked regularly for packing leakage and lubricate packing with food grade lubricant. If there is a leak, tighten packing gland bolts evenly. If leaking continues, replace packing.
 - Use proper packing procedures when repacking valves. Use the proper packing for the service. When repacking the valve fully open the valve so the wedge is firmly against the interior of the bonnet, this will allow the valve to be repacked with only slight or not leakage under pressure. Contact J&S Valve if packing is needed. Know the valve size, type and year manufactured.

SAFETY

All safety measures must be taken to avoid personal injury.

1. Valves are not to be used to align pipe. Large valves should be independently supported.
2. General installation:
 - Valves must be properly supported using safe techniques.
 - Crossover pattern must be used when tightening bolts to load the bolts evenly.
 - Piping practices according to the applicable code or specification must be followed.
 - Debris and foreign material must be cleaned from pipeline and valve prior to installation.