



Ball Valves

Installation, Operation & Maintenance of Ball Valves

1.- USE

Ball Valves are used mainly for shut-off applications, using a handle that is turned 90 degrees or a quarter turn. The rotation of the handle causes the rotational movement of the inner sphere, which performs the function of shutter. Because of the nature of our Ball Valves, the intermediate position involves working in premature wear of ball and seats. Our ball valves can be operated up to 210 bar (3000 PSI) and up to 200°C (392°F) with appropriate seat materials. See our Technical Data Sheets.

CAUTION: Ball Valves must be lifted in such a way that the body holds the whole weight. Don't lift the valve by the handle or actuator.

2.- INSTALLATION

2.1.- THREADED BALL VALVE INSTALLATION

- Install valve in the open position.
- Pipe connections should be free of dirt and metal shavings.
- Several wraps of PTFE tape is recommended for use of pipe joint sealant.

2.2.- SOLDER BALL VALVE INSTALLATION

- Install valve in the open position.
- Proper preparation of tubing prior to installation is critical to get a joint. The tubing must be cut square, de-burred, and cleaned with a solvent.
- Never exceed the 70 ampere of current intensity for welding.
- Wrap the valve body with a damp cloth. (Only for VB-12)
- Apply heat directing the flame away from the body or center of the valve. Excessive heat can damage the tailpiece-to-body seal and the PTFE seats. (Only for VB-12)
- Ensure ends match and clean carefully the contact's surface. Weld the valve to the pipe with 4 joints in every end and remove the internal parts to avoid injuries from hot temperature. Complete the welding and before placing the internal parts again, wait till it cools down. (VB-14, VB-15 & VB-65)

2.3.- FLANGED BALL VALVE INSTALLATION

- Install valve in the open position.
- Make sure flange's norm coincides. Pipe and valve must be perfectly aligned and have a good support to avoid tension in the junction.
- Use joints between flanges appropriate to the service and center it conveniently.
- Tighten gradually the screws, crossed, moderate and constant.
- Don't force the union of the flanges with the screws when space exists among them.

2.3.- BALL VALVE WITH ACTUATOR

- In the case of adapting pneumatic or electrical actuators, you should moreover follow the specific actuator's manual.
- Make sure you're using the appropriate actuator according to the valve.
- Tighten moderately joint's screws if necessary.

3.- OPERATION

- ✘ - The valve must work only in the positions "fully open" or "fully closed". To leave the valve in a intermediate position (half-open), may cause severe damage in the seats and seals.
- In valves operated with a handle, when it's aligned with the valve's stem (pipe), it means "open", on the other hand, if the handle is perpendicular (90-degree) to the pipe, it means "closed".
- When valves are used at elevated temperatures, precautions must be taken during operation to prevent burns to hands.
- In valves operated with actuators, they have mechanical indicators showing if the valve is "open" or "closed". By rotating the wheel a linear member moves, turning clockwise to shut-off the valve.
- It's not recommended to let the valve be a long time without operating. If possible, it should be opened at regular intervals to ensure proper and continuous operation

4.- MAINTENANCE

- Wait until the system is depressurized and cold.
- When using dangerous fluids, before carrying out any maintenance operations, drain the system and do a test in the workbench, before installing again.
- Perform atmospheric leakage tightness, and if necessary tighten again the screws.
- Inspect the good condition of seats and ball. Clean inner parts. If necessary, replace parts or full valve.
- Depending on the criticality of service, provide spare parts and gasket kit.

CAUTION: Do not disassemble valve while under pressure.



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