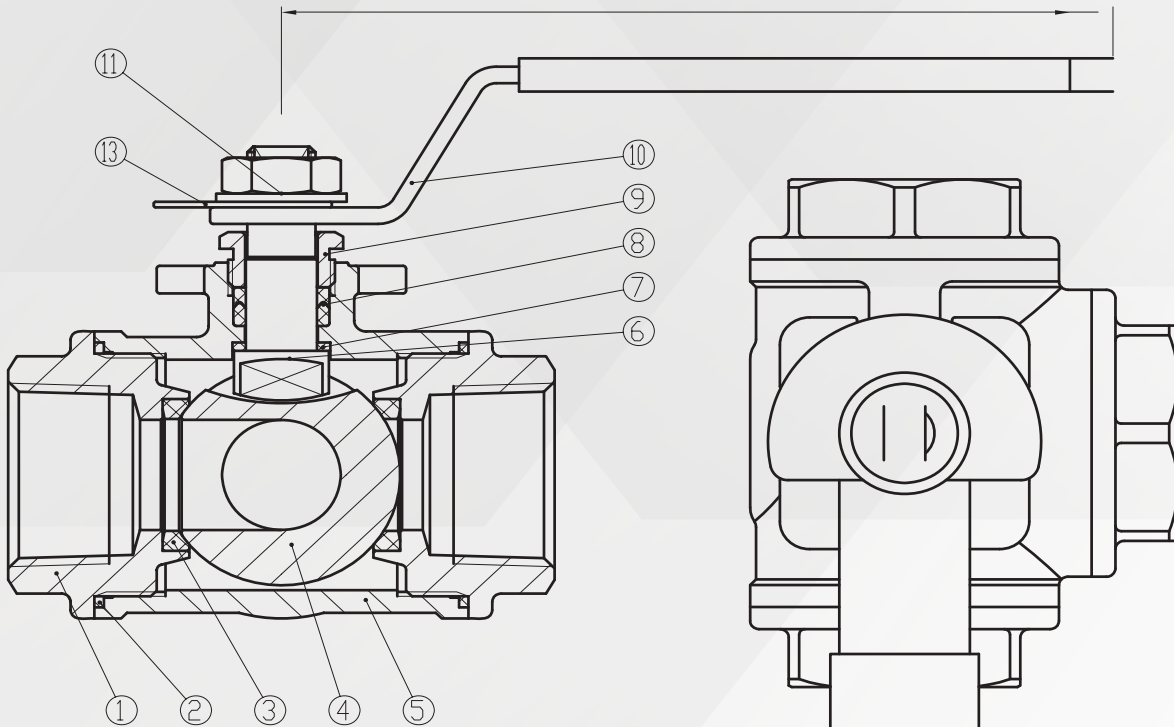


3-Way Ball Valve 1000# NPT Threaded Installation Operation and Maintenance



13	INDICATOR BOARD	1
12	NUT	1
11	WASHER	1
10	HANDLE	1
9	GLAND	1
8	PACKING	1
7	STEM WASHER	1
6	STEM	1
5	BODY	1
4	BALL	1
3	SEAT	4
2	GASKET	3
1	BONNET	3

Refer to the diagram and parts list above for a detailed view of each component, assisting with installation, operation, and maintenance for optimal valve performance.



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OVERVIEW

The Three-Way Threaded Ball Valve is designed for efficient fluid direction and control within multi-port piping systems. This versatile valve provides flexible flow options by allowing users to divert, combine, or shut off fluid through different paths. Ideal for applications where managing flow across multiple lines is essential, the three-way ball valve supports streamlined operations and reliable control in a compact, easy-to-install design.

STORAGE AND HANDLING

- **Storage Conditions:** Store in a clean, dry area to prevent corrosion or contamination. Protect the valve from impacts, dust, and humidity.
- **Handling:** Handle carefully to avoid damage to the valve body, threaded ends, and operating components. Use protective covers for all end connections to prevent debris entry.

PRE-INSTALLATION

- **Inspection**
 - Inspect the valve for any visible damage that may have occurred during transportation.
 - Verify the valve type, port configuration, and size match the installation requirements.
- **Pipeline Preparation**
 - Flush the pipeline with an appropriate fluid to remove debris that may impact sealing.
 - Check the mating pipe threads for cleanliness and compatibility with valve threads.

INSTALLATION ORIENTATION

- 3-way threaded ball valves can be installed in any orientation (horizontal or vertical) without impacting performance. Ensure accessibility to the handle or actuator for ease of operation and maintenance.



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INSTALLATION PROCEDURES

- End Protector Removal: Remove end protectors before installing the valve.
- Thread Cleaning: Clean threads on both the valve and mating pipes to ensure a secure connection. Use anti-seize thread sealant on male threads only to avoid galling.
- Threaded Connection:
 - Insert the valve into the pipeline by applying a pipe wrench or spanner to the connector closest to the pipe being worked.
 - Avoid applying force directly to the valve body, as this could damage the connection or body joint.
- Alignment: Ensure that the pipes are properly aligned to prevent stress from external loads or thermal expansion.

OPERATION

- Quarter-Turn Function: Operate the valve by rotating the handle 90° to open or close. Close the valve by turning clockwise.
- Port Configuration
 - L-Port: Controls media flow between two outlets at a 90° angle. Ideal for switching between two flows or diverting media to a secondary outlet.
 - T-Port: Enables versatile routing by allowing media to flow between three ports simultaneously or in a 90° interval. T-ports are suitable for complex flow control needs.
- Manual and Automated Operation: The valve can be operated manually with a handle or automated using electric or pneumatic actuators. For actuated valves, consult the actuator manual for specific operating instructions.



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MAINTENANCE INSTRUCTIONS

- Regular maintenance is essential to ensure optimal valve performance and longevity.
- Routine Checks
 - Operate the valve fully open and closed three times during each maintenance check.
 - If the valve has not been used for extended periods, operate it five times monthly to prevent seizing.
- Leak Inspections:
 - Check for leaks at the stem seals, seats, and gasket.
 - If any leaks are detected, tighten components to the specified torque. If leaks persist, replace seats, seals, or gaskets as needed.
- Lubrication: Lubricate the stem and ball as needed for smooth operation.

SAFETY PRECAUTIONS

- Pressure Release: Before performing maintenance or removal, place the valve in a partially open position to vent any trapped pressure.
- Avoid Partial Open Positioning: Leaving the valve in a partially open position can damage the seats and reduce valve lifespan.
- Solidifying Media: Do not allow media that can crystallize, solidify, or polymerize to stand in the ball cavity, as this can impair valve performance.

STORAGE AND LONG-TERM MAINTENANCE

- Long-Term Storage:
 - If storing the valve for an extended period, operate the valve fully open and closed periodically to prevent sticking.
 - Apply a light coating of rust inhibitor or anti-corrosion agent if stored in a high-humidity environment.
- Periodic Checks: Check stored valves for signs of corrosion, leaks, or any physical damage every three months.