

Installation, Operation, and Maintenance Manual

This manual is intended as a guide to assist in the installation, operation, and maintenance of the Howell HSP2D 3-Way direct mount ball valves. For best performance the process application of the Howell HSP2D must be in accordance with the pressure and temperature ratings for the valve body and seals. Installation and valve operation must comply with municipal codes and regulations.

Valve Installation

The HSP2D valve can be installed in any direction using standard pipe fitting practice. Once installed the whole piping system should be pressure tested and the operating function of the valve tried about three times to ensure correct performance.

- Proper support for the weight of the pipeline is required to prevent stress and tension on the valve.
- Inspect to see if there are any foreign particles in the valve bore. The pipe end connections must be clean, and the lines need to be flushed to remove dirt, rust or other particles that could result in blockage or leaking.
- Put the ball in the open position to avoid possible damage to the sealing surfaces. Keep the valve in the open position until total installation is completed and the line has been flushed to remove any debris.
- Apply suitable sealant on the pipe threads.
- A pipe wrench can only be used on the valve’s hexagon end caps. Tightening on the body or handle may cause damage to the valve.
- When installing automated valves make sure the ball is in the correct position.

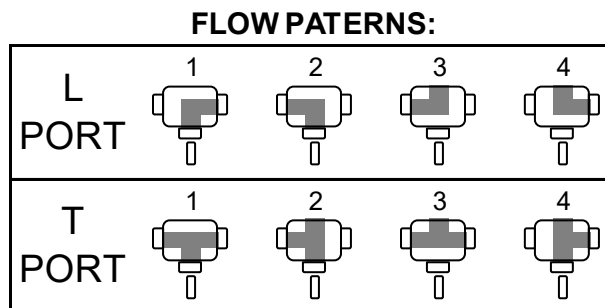
WARNING

Personnel should take precautions to wear the appropriate protection equipment such as safety shoes, gloves, safety glasses and hard hat. The line should be depressurized and drained before installing the valves.

Operation

Howell HSP2D 3-Way direct mount ball valves are available in L-Port and T-Port styles.

- L-Port style flow: two flow port shaped as the letter “L”.
- T-Port style flow: three flow port shaped as the letter “T”.



These ball valves are 360° operation basis. The flow direction indicator should be shown on the handle. Full open or full close is recommended to prevent possible damaged to the seats. Any medium, which may cause solidification or crystallization should not be allowed in the cavities of ball valves. In case of medium found, DO NOT force the valve in either direction. Dismantling and cleaning should be first carried out before the re-operation.

Maintenance

In general the Howell HSP2D ball valves do not require regular maintenance or internal lubrication during service. The valves are manufactured with a silicone free lubricant. The HSP2D valves have a live loaded stem design with Belleville washers for high cycle life. If required, slight stem packing wear can be resolved by tightening the packing nut. Do not over tighten since that will elevate the operating torque. With certain applications the longevity of the seat life can be prolonged by reversing the valve in the pipeline.

Valve Disassembly

Appropriate protection like gloves and a face shield should be worn when maintenance and disassembly is performed. If harmful or flammable media was being used in the piping system the valve must be decontaminated prior to disassembly. Caution is needed when removing the valve from the pipeline since fluids can be trapped.

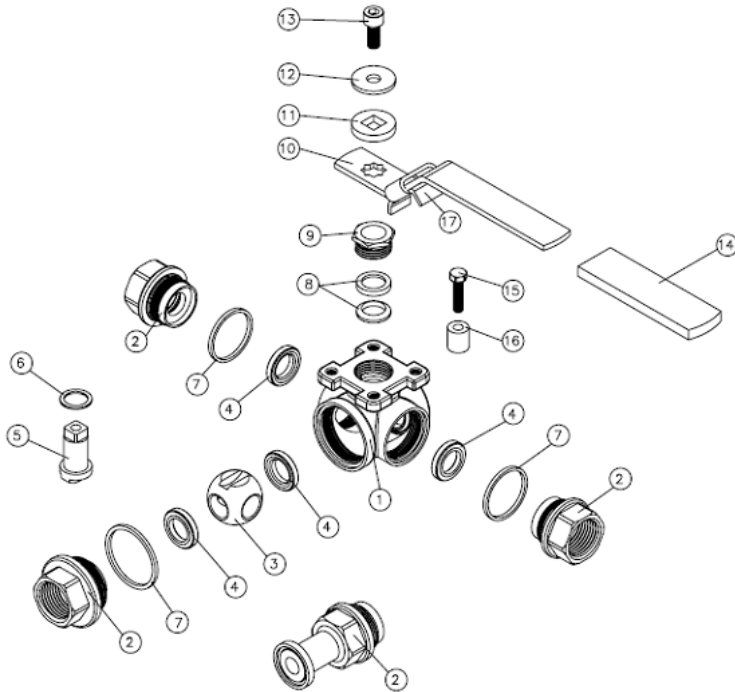
- Relieve all pressure from the pipeline with the valve in the open position.
- Put the valve in a semi-open position and flush the pipeline to help remove any hazardous media.
- Cycle the valve open and close to depressurize the valve.
- Replace the ball if scratched or damaged.
- Howell replacement kits are available to replace the stem packing, seat gaskets and thrust washers.
- Check the wall thickness of the valve body and cap. The minimum thickness must be maintained in according to ASME B16.34.
- Final inspection and testing after reassembly is required. Cycle the valve several times to make sure all the parts are assembled correctly. If there is restriction there may be parts incorrectly positioned and causing interference.

Storage

Proper storage is required if the valves are not for immediate usage. The valves should remain packaged in the open position. The valves should be in a clean and waterproof area to safeguard against dirt and moisture.

Warranty

The Howell HSP2D 3-Way direct mount ball valves have a warranty of 12 months from the date of purchase that the valves will be free from defects in workmanship and materials. Warranty is void for improper installation, usage, application, maintenance, modifications, storage, shipping or handling. Under warranty identical valves, parts or a refund of the original price will be issued. Any extra installation, engineering or other coincidental costs incurred in connection with repair or replacement are not covered under warranty.

Parts List


Item	Part	Material
1	Body	ASTM A351 CF8M
2	End Cap	ASTM A351 CF8M
3	Ball	ASTM A351 CF8M
4	Seat	RPTFE
5	Stem	316 SS
6	Thrust Washer	RPTFE
7	End Seals	RPTFE
8	Stem Packing	RPTFE
9	Gland Bushing	304 SS
10	Handle	304 SS
11	Washer	304 SS
12	Washer	304 SS
13	Handle Nut	304 SS
14	Handle Sleeve	Vinyl
15	Screw	304 SS
16	Stopper Nut	304 SS
17	Locking Device	304 SS