

Installation & Maintenance Instructions



2-WAY DIRECT LIFT SOLENOID VALVES
NORMALLY CLOSED OPERATION
BRASS OR STAINLESS STEEL CONSTRUCTION
3/4" NPT LOW PRESSURE SERVICE

SERIES
8030

I&M No.V7517

NOTICE: See separate solenoid installation and maintenance instructions for information on: Wiring, Solenoid Temperature, Cause of Improper Operation, Coil or Solenoid Replacement.

DESCRIPTION

Series 8030 valves are 2-way normally closed direct lift solenoid valves designed for low pressure service. Valves are made of rugged forged brass or stainless steel. Series 8030 valves may be provided with a general purpose/watertight, open-frame or watertight/explosionproof solenoid.

OPERATION

Normally Closed: Valve is closed when solenoid is de-energized; open when energized.

NOTE: No minimum operating pressure differential required.

Manual Operator (optional feature)

Manual operator allows manual operation when desired or during an electrical power outage. To engage manual operator (open the valve), turn stem clockwise until it hits a stop. Valve will now be in the same position as when the solenoid is energized. To disengage manual operator (close the valve), turn stem counterclockwise until it hits a stop.

⚠ CAUTION: For valve to operate electrically, manual operator stem must be fully rotated counterclockwise.

INSTALLATION

Check nameplate for correct catalog number, pressure, voltage, frequency, and service. Never apply incompatible fluids or exceed pressure rating of the valve. Installation and valve maintenance to be performed by qualified personnel.

Future Service Considerations

Provision should be made for performing seat leakage, external leakage, and operational tests on the valve with a nonhazardous, noncombustible fluid after disassembly and reassembly.

Temperature Limitations

Valves with design change letter "K" or "P" within the catalog number (example: 8030K043) have a maximum fluid temperature of 180°F. Refer to separate solenoid Installation and Maintenance Instructions for maximum ambient temperature.

Positioning

Valve is designed to perform properly when mounted in any position. However, for optimum life and performance, the solenoid should be mounted vertical and upright to reduce the possibility of foreign matter accumulating in the solenoid base sub-assembly area.

Mounting

Refer to Figure 1 for mounting bracket (optional feature) mounting dimensions.

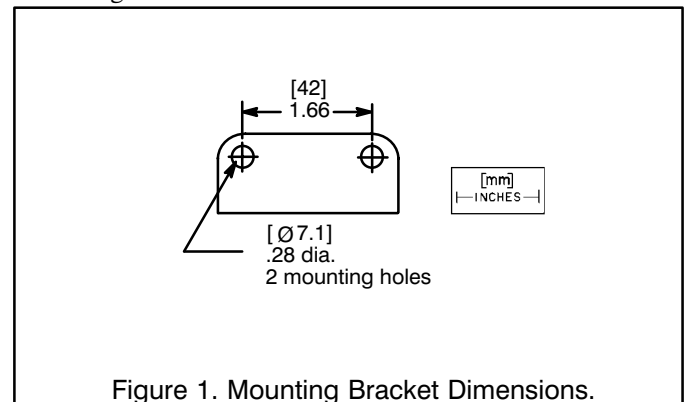


Figure 1. Mounting Bracket Dimensions.

Piping

Connect piping to valve according to markings on valve body. Apply pipe compound sparingly to male pipe threads only. If applied to valve threads, the compound may enter the valve and cause operational difficulty. Avoid pipe strain by properly supporting and aligning piping. When tightening the pipe, do not use valve or solenoid as a lever. Locate wrenches applied to valve body or piping as close as possible to connection point.

⚠ CAUTION: To protect the solenoid valve, install a strainer or filter suitable for the service involved in the inlet side as close to the valve as possible. Clean periodically depending on service conditions. See ASCO Series 8600, 8601 and 8602 for strainers.

▲ WARNING: To prevent the possibility of death, serious injury or property damage, turn off electrical power, depressurize valve, and vent fluid to a safe area before servicing the valve.

NOTE: It is not necessary to remove the valve from the pipeline for repairs.

Cleaning

All solenoid valves should be cleaned periodically. The time between cleanings will vary depending on the medium and service conditions. In general, if the voltage to the coil is correct, sluggish valve operation, excessive noise or leakage will indicate that cleaning is required. In the extreme case, faulty valve operation will occur and the valve may fail to open or close. Clean strainer or filter when cleaning the valve.

Preventive Maintenance

- Keep medium flowing through the valve as free from dirt and foreign material as possible.
- Periodic exercise of the valve should be considered if ambient or fluid conditions are such that corrosion, elastomer degradation, fluid contamination build up, or other conditions that could impede solenoid valve shifting are possible. The actual frequency of exercise necessary will depend on specific operating conditions. A successful operating history is the best indication of a proper interval between exercise cycles.
- Depending on the medium and service conditions, periodic inspection of internal valve parts for damage or excessive wear is recommended. Thoroughly clean all parts. If parts are worn or damaged, install a complete rebuild kit.

Causes of Improper Operation

- **Incorrect Pressure:** Check valve pressure. Pressure to valve must be within range specified on nameplate.
- **Excessive Leakage:** Disassemble valve and clean all parts. If parts are worn or damaged, install a complete ASCO Rebuild Kit.

Valve Disassembly

1. Disassemble valve in an orderly fashion using exploded views for identification and placement of parts.
2. Remove solenoid enclosure. See separate instructions.
3. Unscrew solenoid base sub-assembly from valve body and remove body gasket.
4. Remove bonnet screws (4) and valve bonnet
5. Remove body gasket, core/disc sub-assembly and core spring.

6. For normal maintenance, it is not necessary to remove or disassemble the manual operator unless external leakage is evident. If required, unscrew manual operator bonnet from valve body and remove gasket. Remove stem pin, stem and stem gasket.
7. All parts are now accessible for cleaning or replacement. If parts are worn or damaged, install a complete ASCO Rebuild Kit.

Valve Reassembly

1. Lubricate all gaskets with DOW CORNING® 111 Compound lubricant or an equivalent high-grade silicone grease.
2. Install body gasket into valve body.
3. For valves provided with a manual operator, reassembly in reverse order of disassembly. Torque manual operator bonnet to 75 ± 10 in-lbs [$8,5 \pm 1,1$ Nm].
4. Install core/disc sub-assembly and core spring into valve body.
5. Replace valve bonnet and bonnet screws (4). Torque bonnet screws evenly in a crisscross manner to 110 ± 10 in-lbs [$12,4 \pm 1,1$ Nm].
6. Replace solenoid base gasket and hand thread solenoid base sub-assembly into valve body. Then torque solenoid base sub-assembly to 175 ± 25 in-lbs [$19,8 \pm 2,8$ Nm].
7. Install solenoid. See separate instructions.

▲ WARNING: To prevent the possibility of death, serious injury or property damage, check valve for proper operation before returning to service. Also perform internal seat and external leakage tests with a nonhazardous, noncombustible fluid.

8. Restore line pressure and electrical power supply to valve.
9. After maintenance is completed, operate the valve a few times to be sure of proper operation. A metallic *click* signifies the solenoid is operating.

ORDERING INFORMATION FOR ASCO REBUILD KITS

Parts marked with an asterisk (*) in the exploded view are supplied in Rebuild Kits. When Ordering Rebuild Kits for ASCO valves, order the Rebuild Kit number stamped on the valve nameplate. If the number of the kit is not visible, order by indicating the number of kits required, and the Catalog Number and Serial Number of the valve(s) for which they are intended.

Torque Chart

Part Name	Torque Value in Inch-Pounds	Torque Value in Newton-Meters
Solenoid Base Sub-Assembly	175 ± 25	$19,8 \pm 2,8$
bonnet screw	110 ± 10	$12,4 \pm 1,1$
manual operator bonnet	75 ± 10	$8,5 \pm 1,1$

