

ASCO 8320G184

ASCO 8320G184 RED-HAT II Solenoid Valve User Manual

Model: 8320G184

1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of the ASCO 8320G184 RED-HAT II Solenoid Valve. Please read this manual thoroughly before attempting any procedures to ensure proper handling and to prevent potential hazards or damage to the equipment.

The ASCO 8320G184 is a 2-way, normally closed solenoid valve designed for general purpose applications, featuring a 1/4 inch NPT connection and operating on 24V-DC power. It is suitable for controlling the flow of various media including air, inert gases, water, and light oil.

2. SAFETY INFORMATION

Always observe the following safety precautions to prevent personal injury or equipment damage:

- **Electrical Safety:** Disconnect all power to the valve and associated equipment before installation, maintenance, or troubleshooting. Ensure wiring is performed by qualified personnel in accordance with local electrical codes.
- **Pressure Safety:** Depressurize the system completely before working on the valve. Wear appropriate personal protective equipment (PPE) such as safety glasses.
- **Temperature:** Be aware of potential high or low temperatures of the valve and media. Allow components to cool before handling if necessary.
- **Proper Use:** Use the valve only for its intended purpose and within its specified pressure, temperature, and voltage ratings.

3. PRODUCT OVERVIEW

The ASCO 8320G184 RED-HAT II Solenoid Valve consists of a valve body, a solenoid coil, and an operator assembly. It is designed for reliable and precise control in various industrial applications.



Figure 1: Overall view of the ASCO 8320G184 RED-HAT II Solenoid Valve.



Figure 2: Close-up view of the 1/4 inch NPT threaded connection.



Figure 3: View showing the valve body and attached electrical wiring.



Figure 4: Detailed view of the solenoid coil label, displaying electrical and pressure ratings.

4. SETUP (INSTALLATION)

4.1 Pre-Installation Checks

- Verify that the valve's specifications (voltage, pressure, port size) match your system requirements.
- Ensure the system is clean and free of debris that could obstruct valve operation.

- Confirm that the media is compatible with the valve's materials of construction.

4.2 Mounting

Mount the valve with the solenoid coil in the upright vertical position to ensure optimal performance and longevity. Avoid mounting the valve upside down or horizontally if possible, as this can affect operation.

4.3 Piping Connections

The valve features 1/4 inch NPT (National Pipe Tapered) connections. Apply a suitable pipe sealant to the male threads of the connecting pipes. Do not overtighten the connections, as this can damage the valve body. Ensure the flow direction matches the arrow indicated on the valve body.

4.4 Electrical Connections

Connect the valve to a 24V-DC power supply. Refer to the wiring diagram on the coil label (Figure 4) for correct polarity if applicable. Ensure all electrical connections are secure and insulated to prevent short circuits and electrical hazards. The coil is rated for 11.6 Watts.

5. OPERATING INSTRUCTIONS

The ASCO 8320G184 is a normally closed valve, meaning it remains closed when de-energized and opens when the solenoid coil is energized with 24V-DC. When power is applied to the coil, an electromagnetic field is created, which pulls the plunger, opening the valve orifice and allowing media to flow.

5.1 Initial Startup

- After installation, slowly introduce pressure to the system and check for leaks at all connections.
- Apply 24V-DC power to the solenoid coil and observe the valve's operation. The valve should open.
- Remove power and confirm the valve closes.

6. MAINTENANCE

Regular maintenance ensures the longevity and reliable operation of your solenoid valve. Always depressurize the system and disconnect power before performing any maintenance.

6.1 Routine Inspection

- Periodically inspect the valve for external leaks, corrosion, or damage to the coil.
- Check electrical connections for tightness and signs of wear.

6.2 Cleaning and Repair

If the valve exhibits sluggish operation or leakage, internal components may require cleaning or replacement. A rebuild kit (ASCO Part No. 302227) is available for servicing the valve. Refer to the rebuild kit instructions for detailed disassembly and reassembly procedures.



Figure 5: Packaging label showing model number 8320G184 and SKU D553828.

7. TROUBLESHOOTING

This section provides solutions to common operational issues.

Problem	Possible Cause	Solution
Valve does not open when energized	No power to coil; Incorrect voltage; Coil failure; Obstruction in valve	Check power supply and connections; Verify 24V-DC; Replace coil; Clean valve internals.
Valve does not close when de-energized	Debris preventing plunger return; Spring failure; Residual magnetism	Clean valve internals; Replace internal components using rebuild kit.
Leakage from valve body or connections	Loose connections; Damaged seals/gaskets; Cracked valve body	Tighten connections; Replace seals/gaskets (rebuild kit); Replace valve if body is damaged.
Coil overheating	Incorrect voltage; Continuous duty cycle exceeding rating; High ambient temperature	Verify correct voltage; Ensure coil is rated for continuous duty if required; Improve ventilation.

8. SPECIFICATIONS

Key technical specifications for the ASCO 8320G184 RED-HAT II Solenoid Valve:

Parameter	Value
Model Number	8320G184

Parameter	Value
Coil Voltage	24V-DC
Power Consumption	11.6 Watts
Port Size	1/4 inch NPT
Function	2-Way, Normally Closed
Pressure Rating (Air/Inert Gas)	115 PSI
Pressure Rating (Water)	115 PSI
Pressure Rating (Light Oil)	115 PSI
Rebuild Kit No.	302227
Item Dimensions (L x W x H)	7 x 6 x 5 inches (approximate shipping dimensions)
Item Weight	1.55 Pounds

9. WARRANTY AND SUPPORT

ASCO products are manufactured to high-quality standards. For specific warranty information, please refer to the documentation provided with your purchase or contact ASCO customer support. For technical assistance or inquiries regarding parts and service, please contact your authorized ASCO distributor or visit the official ASCO website.