

Irritrol 2400S

Irritrol 2400S Slip Globe Valve 1-Inch Instruction Manual

Model: 2400S

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of the Irritrol 2400S 1-inch Slip Globe Valve. Designed for residential irrigation systems, this valve features a robust construction and user-friendly design for reliable performance in various watering applications.

2. SAFETY INFORMATION

Adhere to the following safety guidelines to prevent injury and ensure proper operation:

- Always turn off the main water supply before installing, servicing, or performing any maintenance on the valve or irrigation system.
- If the valve is connected to an irrigation controller, disconnect all electrical power to the controller before working on the valve's solenoid or wiring.
- Wear appropriate personal protective equipment (PPE), such as gloves and eye protection, during installation and maintenance.
- Consult local plumbing and electrical codes for specific installation requirements and ensure compliance.
- Do not operate the valve beyond its specified pressure limits.

3. PRODUCT OVERVIEW

The Irritrol 2400S valve is constructed from heavy-duty, corrosion and UV-resistant PVC, ensuring durability and longevity in outdoor environments. Key features contributing to its reliable operation include:

- **Threaded Bonnet Design:** Facilitates easy servicing and maintenance without requiring removal of the valve from the irrigation system.
- **Rugged, Double-Beaded SANTOPRENE Diaphragm:** Provides a secure, leak-proof seal and consistent performance under varying water pressures.
- **Internal and External Bleed (Flush Mode):** Offers versatile options for manual operation and flushing debris from the system.
- **Full Stainless-Steel Metering System:** Ensures precise and consistent valve operation over time.

- **Multiple Configurations:** Available with various connection types including female NPT, slip, male x male, and male x barb to suit different installation needs.



Image: Irritrol 2400S Slip Globe Valve, showing its robust construction and connection points.

4. SETUP AND INSTALLATION

1. **Prepare the Site:** Excavate the area where the valve will be installed. Ensure sufficient space for making connections and for future servicing. The valve should be installed in a location that allows for easy access.
2. **Turn Off Water Supply:** Locate the main water shut-off valve for your irrigation system and turn it off completely to prevent water flow during installation.
3. **Connect Piping:** The 2400S valve features 1-inch slip connections. Apply appropriate PVC primer and cement to the valve inlets/outlets and the connecting pipes according to the adhesive manufacturer's instructions. Insert pipes firmly into the valve. Allow adequate curing time for the cement before pressurizing the system.
4. **Electrical Connections (if applicable):** If using an irrigation controller, connect the valve's solenoid wires to the common wire and the specific zone wire on your controller. Ensure all electrical connections are secure and protected from moisture using waterproof connectors. Refer to your irrigation controller's manual for detailed wiring diagrams.
5. **System Flush:** Before fully sealing the system or burying the valve, briefly turn on the water supply to flush out any debris from the pipes. Turn off the water supply again after flushing.
6. **Final Checks:** Once all connections are made and the cement has cured, slowly turn the main water

supply back on. Carefully inspect all connections for any signs of leaks.

5. OPERATING INSTRUCTIONS

The Irritrol 2400S valve can be operated automatically via an irrigation controller or manually.

- **Automatic Operation:** The valve will open and close automatically when signaled by a properly programmed irrigation controller. Ensure your controller settings match your desired watering schedule.
- **Manual Operation (Internal Bleed):** To manually open the valve, turn the solenoid cap counter-clockwise approximately one-half turn. Water will discharge from the solenoid area, indicating the valve is open. To close the valve, turn the solenoid cap clockwise until it is snug.
- **Manual Operation (External Bleed/Flush Mode):** To manually open the valve without water discharging from the solenoid, locate the bleed screw (if present) on the valve bonnet and turn it counter-clockwise. This will open the valve. To close, turn the bleed screw clockwise until it is snug.
- **Flow Control (Optional):** If your valve model includes a flow control knob, it can be used to adjust the water flow rate through the valve. Turn the knob clockwise to decrease flow and counter-clockwise to increase flow. Do not overtighten the flow control knob.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Irritrol 2400S valve.

- **Regular Inspection:** Periodically inspect the valve for any visible signs of leaks, physical damage, or accumulation of debris around the valve body.
- **Diaphragm Servicing:** The threaded bonnet design allows for easy access to the diaphragm. First, turn off the main water supply. Unscrew the bonnet by turning it counter-clockwise. Carefully remove the diaphragm and inspect it for any tears, cracks, or debris. Clean any debris and replace the diaphragm if it shows signs of wear or damage. Reassemble the valve, ensuring the double-beaded diaphragm is seated correctly for a leak-proof seal, and tighten the bonnet securely.
- **Solenoid Check:** If the valve is not operating electrically, check the solenoid for proper wiring connections. You can test the solenoid for continuity using a multimeter. A faulty solenoid may need replacement.
- **Winterization:** In regions prone to freezing temperatures, it is crucial to properly winterize your irrigation system, including the valve. This typically involves draining all water from the system to prevent freeze damage. Consult local guidelines for proper winterization procedures.

7. TROUBLESHOOTING

This section addresses common issues you might encounter with your Irritrol 2400S valve.

Problem	Possible Cause	Solution
Valve not opening	No water supply; Faulty electrical connection/solenoid; Debris under diaphragm; Manual bleed screw open.	Check main water valve; Verify wiring and solenoid continuity; Inspect and clean diaphragm; Ensure bleed screw is fully closed.

Problem	Possible Cause	Solution
Valve not closing / Constant leak	Debris in valve seat; Damaged/improperly seated diaphragm; Solenoid stuck open or receiving constant signal; Loose bonnet.	Turn off water, disassemble and clean valve interior; Inspect and replace diaphragm if damaged; Check controller for constant signal; Tighten bonnet securely.
Low water flow	Partial obstruction in valve/piping; Flow control partially closed.	Inspect valve and pipes for obstructions; If equipped, ensure flow control is fully open.

8. SPECIFICATIONS

Key technical specifications for the Irritrol 2400S Slip Globe Valve:

Model Number: 2400S

Valve Type: Globe Valve

Size: 1 Inch

Material: Stainless Steel (internal components), Heavy-duty PVC (body)

Inlet Connection Type: National Pipe Tapered (NPT)

Outlet Connection Type: FNPT

Thread Type: NPT, Slip, Male x Male, Male x Barb (available configurations)

Number of Ports: 2

Item Dimensions (L x W x H): 5.9 x 3.3 x 3.8 inches

Item Weight: 10.4 ounces

Manufacturer: Irritrol

UPC: 090258041184

9. WARRANTY AND SUPPORT

For detailed warranty information, technical assistance, or to purchase replacement parts, please contact Irritrol customer service directly. It is recommended to retain your purchase receipt as proof of purchase for any warranty claims. You can typically find contact information on the official Irritrol website or through your product retailer.