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› Rain Bird DVF Inline Valve with Flow Control 1 in. FPT | 100-DVF-NPT User Manual

Rain Bird 100-DVF-NPT

Rain Bird DVF Inline Valve with Flow Control

Model: 100-DVF-NPT

Brand: Rain Bird

PRODUCT OVERVIEW

The Rain Bird DVF Inline Valve with Flow Control is an economical irrigation valve designed for residential and light commercial applications where precise flow control is essential. This valve ensures reliable operation and efficient water management for your sprinkler system.



Figure 1: Rain Bird DVF Inline Valve with Flow Control (Model 100-DVF-NPT)

KEY FEATURES

- **Double-filtered pilot-flow design:** Ensures maximum reliability by preventing debris from interfering with valve operation.
- **Balanced-pressure diaphragm:** Contributes to a long operational life for the valve.
- **Internal bleed for spray-free manual operation:** Allows for manual activation without water spraying from the valve box.
- **Unique, easy-to-turn patented pressure assisted flow control mechanism:** Provides precise adjustment of water flow to individual zones.

SPECIFICATIONS

| | |
|------------------------------------|-----------------------------------|
| Material | Plastic |
| Item Dimensions (L x W x H) | 7 x 3 inches |
| Exterior Finish | Stainless Steel |
| Inlet Connection Size | 1 Inch |
| Inlet Connection Type | FPT (Female Pipe Thread) |
| Outlet Connection Type | FNPT (Female National Pipe Taper) |
| Number of Ports | 2 |
| Specification Met | ASSE 1016 |
| Valve Type | Diaphragm |

SETUP AND INSTALLATION

Proper installation is crucial for the optimal performance and longevity of your Rain Bird DVF valve. It is recommended to consult a professional irrigation technician if you are unsure about any steps.

- 1. Turn Off Water Supply:** Before beginning any work, ensure the main water supply to your irrigation system is completely shut off.
- 2. Locate Valve Box:** Identify the existing valve box where the new valve will be installed. Ensure adequate space for installation and future maintenance.
- 3. Prepare Piping:** Cut and prepare the existing irrigation pipes to accommodate the 1-inch FPT connections of the new valve. Ensure clean cuts and remove any burrs.
- 4. Connect Valve:** Thread the valve onto the pipes, ensuring a watertight seal. Use appropriate thread sealant (e.g., PTFE tape or pipe dope) on the male threads. Do not overtighten.
- 5. Wire Solenoid:** Connect the two wires from the valve's solenoid to the corresponding wires from your irrigation controller. Typically, one wire connects to the common wire and the other to the zone wire. Use waterproof connectors suitable for direct burial.
- 6. Test Connections:** Slowly turn on the main water supply and check for any leaks at the connections.
- 7. Secure Valve:** Position the valve securely within the valve box, ensuring it is level and stable.

OPERATING INSTRUCTIONS

The Rain Bird DVF valve is designed for automatic operation via an irrigation controller, but also offers manual control and flow adjustment.

- **Automatic Operation:** The valve will open and close automatically based on the programming of your irrigation controller. Ensure your controller is properly set for the desired watering schedule.
- **Manual Operation (Internal Bleed):** To manually open the valve without water spraying, turn the solenoid counter-clockwise approximately one-half to three-quarters of a turn. This activates the internal bleed, allowing water to flow. To close, turn the solenoid clockwise until snug.
- **Flow Control Adjustment:** The flow control knob on top of the valve allows you to adjust the amount of water flowing through the valve.
 - Turn the knob clockwise to *decrease* flow.
 - Turn the knob counter-clockwise to *increase* flow.

Adjust flow control to optimize sprinkler performance and prevent misting or excessive runoff.

MAINTENANCE

Regular maintenance helps ensure the longevity and efficient operation of your DVF valve.

- **Periodic Inspection:** Periodically inspect the valve for any visible signs of leaks, cracks, or damage. Check the wiring connections for corrosion or loose contacts.
- **Clean Valve Box:** Keep the valve box clear of dirt, debris, and vegetation to ensure proper ventilation and access for maintenance.
- **Winterization:** In regions subject to freezing temperatures, proper winterization is essential to prevent damage. This typically involves shutting off the water supply, draining the system, and blowing out the lines with compressed air. Consult local guidelines for specific winterization procedures.
- **Diaphragm and Solenoid Check:** If the valve is not operating correctly, the diaphragm or solenoid may need inspection or replacement. These are internal components that can wear over time.

TROUBLESHOOTING

If you encounter issues with your Rain Bird DVF valve, consider the following common problems and solutions:

- **Valve Not Opening:**
 - Check the irrigation controller for proper programming and power.
 - Verify the wiring connections to the solenoid are secure and free of corrosion.
 - Test the solenoid for proper resistance using a multimeter. A typical Rain Bird solenoid should show a resistance reading around 20-70 ohms (often around 40-50 ohms). A reading of zero or infinite ohms indicates a faulty solenoid.
 - Ensure the main water supply to the system is on.
 - Check for debris obstructing the diaphragm or pilot filter.
- **Valve Not Closing (Constant Flow):**
 - Check for debris lodged in the valve, preventing the diaphragm from seating properly.
 - Inspect the diaphragm for tears or damage.
 - Ensure the flow control knob is not set to fully open or stuck.
 - Verify the solenoid is not stuck in the open position or receiving continuous power from the controller.
- **Low Flow or Pressure:**
 - Check the flow control knob setting; it may be too restrictive.
 - Inspect the valve for partial obstructions or blockages.
 - Ensure adequate water pressure is supplied to the system.
- **Leaks from Valve:**
 - Tighten any loose screws on the valve bonnet.
 - Inspect the diaphragm for damage or improper seating.
 - Check the O-rings and seals for wear or damage.

WARRANTY AND SUPPORT

Rain Bird products are designed for durability and performance. For specific warranty information, please refer to the documentation included with your purchase or visit the official Rain Bird website. For technical support, replacement parts, or further assistance, please contact Rain Bird customer service or an authorized dealer. You can find more information and contact details on the [Rain Bird Official Website](#).

