

## Manuals+

[Q & A](#) | [Deep Search](#) | [Upload](#)

[manuals.plus](#) /

› [Rain Bird](#) /

› [Rain Bird 100-HV 1-inch 24V Irrigation Solenoid Valve Instruction Manual](#)

## Rain Bird 100-HV

# Rain Bird 100-HV 1-inch 24V Irrigation Solenoid Valve Instruction Manual

Model: 100-HV | Brand: Rain Bird

## 1. PRODUCT OVERVIEW

The Rain Bird 100-HV is a 1-inch 24V irrigation solenoid valve designed for automatic watering systems. It features a compact design suitable for tight installations and is constructed with a polypropylene body reinforced with fiberglass for enhanced durability. This valve is compatible with standard electrical programmers for automated operation.

### Key Features:

- **1-inch Connection Size:** Standard sizing for common irrigation systems.
- **Screwed Lid:** Allows for easy access and maintenance.
- **Polypropylene Body with Fiberglass:** Provides added strength and resistance to environmental factors.
- **24V Electrical Operation:** Designed to work with electrical irrigation programmers.
- **Compact Design:** Features a 6.5 cm spin radius for installation in confined spaces.
- **Eccentric Diaphragm:** Ensures smooth closing, reducing water hammer effects.
- **Tool Compatibility:** Can be opened using a nut driver, Phillips head screwdriver, or slotted head screwdriver.



Figure 1: Front view of the Rain Bird 100-HV 1-inch 24V Irrigation Solenoid Valve.

## 2. SAFETY INFORMATION

Please read and understand all safety instructions before installing or operating this product. Failure to follow these instructions may result in property damage, personal injury, or electric shock.

- **Electrical Safety:** Always disconnect power to the irrigation controller before performing any wiring or maintenance on the valve. Ensure all electrical connections are waterproof and comply with local electrical codes. This valve operates on 24V AC; do not connect to higher voltage power sources.
- **Water Pressure:** Do not exceed the maximum operating pressure of 100 PSI (6.9 bar). Excessive pressure can damage the valve and other irrigation components.
- **Installation:** Install the valve in an accessible location for maintenance. Ensure proper flow direction as indicated on the valve body.
- **Children and Pets:** Keep children and pets away from irrigation system components during installation and operation.
- **Freezing Conditions:** Drain the irrigation system, including the valve, before freezing temperatures occur to prevent damage.

## 3. PACKAGE CONTENTS

Verify that all components are present before beginning installation:

- Rain Bird 100-HV 1-inch 24V Irrigation Solenoid Valve (Quantity: 1)

*Note: Additional irrigation system components (e.g., controller, piping, sprinklers) are sold separately.*

## 4. SETUP AND INSTALLATION

Follow these steps for proper installation of your Rain Bird 100-HV valve:

1. **Prepare the Site:** Ensure the installation area is clear and provides adequate space for the valve and connections. Dig a trench if necessary for underground installation.
2. **Identify Flow Direction:** Locate the "FLOW" arrow molded into the side of the valve body. This arrow indicates the direction water should flow through the valve. Install the valve so that water flows in the correct direction from the main water supply to the irrigation zone.



Figure 2: Side view of the valve indicating the "FLOW" direction.

3. **Connect to Piping:** The valve has 1-inch threaded connections. Apply thread sealant (e.g., PTFE tape) to the male threads of your irrigation pipes before screwing them into the valve. Hand-tighten, then use a wrench for an additional 1/2 to 1 turn. Do not overtighten.
4. **Electrical Wiring:**

- Ensure power to the irrigation controller is OFF.
- Connect one wire from the valve's solenoid to the common wire of your irrigation system.
- Connect the other wire from the valve's solenoid to the specific zone wire from your 24V AC irrigation controller.
- Use waterproof connectors for all electrical splices, especially if installed outdoors or in damp environments.

5. **Test the System:** Once all connections are secure, slowly turn on the main water supply. Check for leaks. Then, restore power to the irrigation controller and manually activate the zone connected to the valve to ensure it opens and closes correctly.



Figure 3: Top view of the valve showing the solenoid and manual override lever.

## 5. OPERATING INSTRUCTIONS

The Rain Bird 100-HV valve is designed for automatic operation via an irrigation controller, but it also features a manual override.

### Automatic Operation:

Once properly wired to a 24V AC irrigation controller, the valve will open and close according to the programming set on your controller. Refer to your irrigation controller's manual for programming instructions.

## Manual Operation:

To manually open the valve, locate the lever on the solenoid (refer to Figure 3). Turn the lever 1/4 turn to the "ON" position. To close the valve, turn the lever back to the "OFF" position. This feature is useful for testing or temporary watering without using the controller.

Your browser does not support the video tag.

*Video 1: A product summary video demonstrating the features and general appearance of the Rain Bird 100-HV valve.*

## 6. MAINTENANCE

Regular maintenance helps ensure the longevity and proper function of your Rain Bird 100-HV valve.

- **Winterization:** Before the first freeze, drain all water from the irrigation system, including the valve. This prevents damage from freezing water expansion.
- **Cleaning:** Periodically inspect the valve for debris or sediment buildup. If necessary, turn off the water supply, unscrew the lid (using a nut driver, Phillips, or slotted screwdriver), and carefully clean the internal components, especially the diaphragm and solenoid plunger.
- **Leak Inspection:** Regularly check for any signs of leaks around the valve body or connections. Address leaks promptly to prevent water waste and potential damage.

## 7. TROUBLESHOOTING

Here are some common issues and their potential solutions:

Problem	Possible Cause	Solution
Valve does not open.	No power to solenoid, faulty wiring, clogged solenoid, low water pressure.	Check controller programming and power supply. Inspect wiring for breaks or loose connections. Clean or replace solenoid. Verify adequate water pressure.
Valve does not close completely (constant drip).	Debris in valve, damaged diaphragm, manual override left open.	Turn off water, open valve, and clean out debris. Inspect diaphragm for tears or damage and replace if necessary. Ensure manual override is in the "OFF" position.
Water leaks from valve body.	Loose lid, damaged O-ring/gasket, cracked housing.	Tighten lid screws. Inspect and replace O-ring/gasket if damaged. If housing is cracked, the valve needs replacement.
Low flow from sprinklers.	Partially open valve, debris restricting flow, low main water pressure.	Ensure valve is fully open (manual or automatic). Clean valve internals. Check main water supply pressure.

## 8. SPECIFICATIONS

Detailed technical specifications for the Rain Bird 100-HV valve:

- **Model Number:** 100-HV
- **Brand:** Rain Bird
- **Material:** Plastic (Polypropylene with Fiberglass)
- **Inlet Connection Size:** 1 Inch
- **Outlet Connection Size:** 1 Inch

- **Inlet Connection Type:** 24 Volt (for solenoid)
- **Voltage:** 24 Volts AC
- **Maximum Operating Pressure:** 100 PSI (Pound per Square Inch)
- **Number of Ports:** 2
- **Product Dimensions (L x W x H):** 4.21 x 3.15 x 4.53 inches (10.70 x 8.00 x 11.50 cm)

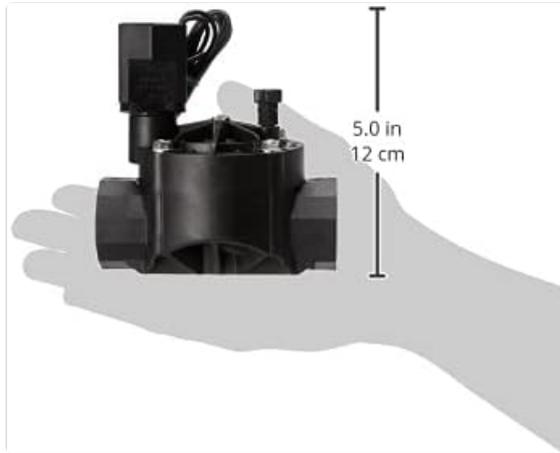


Figure 4: Rain Bird 100-HV valve with approximate dimensions.

- **Item Weight:** 9.5 ounces
- **Color:** Gray
- **Specification Met:** ISO 9001, EN 1074, ASME B16.34

## 9. WARRANTY AND SUPPORT

For specific warranty information, please refer to the documentation provided with your purchase or visit the official Rain Bird website. Keep your proof of purchase for warranty claims.

For technical support, troubleshooting assistance beyond this manual, or to inquire about replacement parts, please contact Rain Bird customer service through their official channels. You can often find contact information on the Rain Bird website or on the product packaging.

**Rain Bird Official Website:** [www.rainbird.com](http://www.rainbird.com)