

## 200PRV Valve

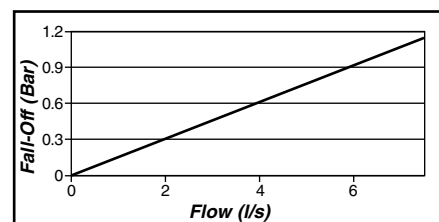
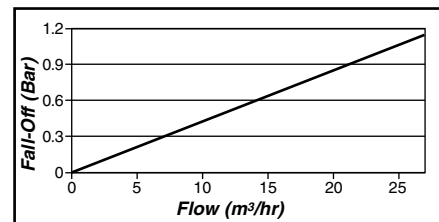
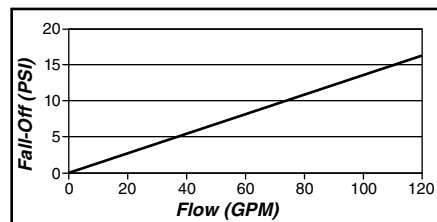
### Installation and Operation Instructions Troubleshooting Guide

#### 200PRV Fall-Off Characteristics

Reduced pressure fall-off is inherent to direct acting regulators and a key factor relating valve characteristics to system requirements. Fall-off is the difference between the static and dynamic pressures downstream of the regulator. It varies with flow and represents the pressure change that occurs when the valve opens.

The following chart depicts the fall-off characteristics of the 200PRV. The zero point represents the valve when there is no flow (valve in lock-up condition) and can be any setting within the outlet pressure adjustment range. As water flows through the open valve, fall-off is the dynamic pressure reduction associated with a given flow.

Example: The regulator is set at 60 psi (4,2 bar) static outlet pressure. If a downstream control valve opens and water flows at 80 gpm (18,2 m<sup>3</sup>/h; 5,1 l/s), the fall-off will be approximately 10 psi (0,7 bar) making the dynamic outlet pressure approximately 50 psi (3,5 bar).



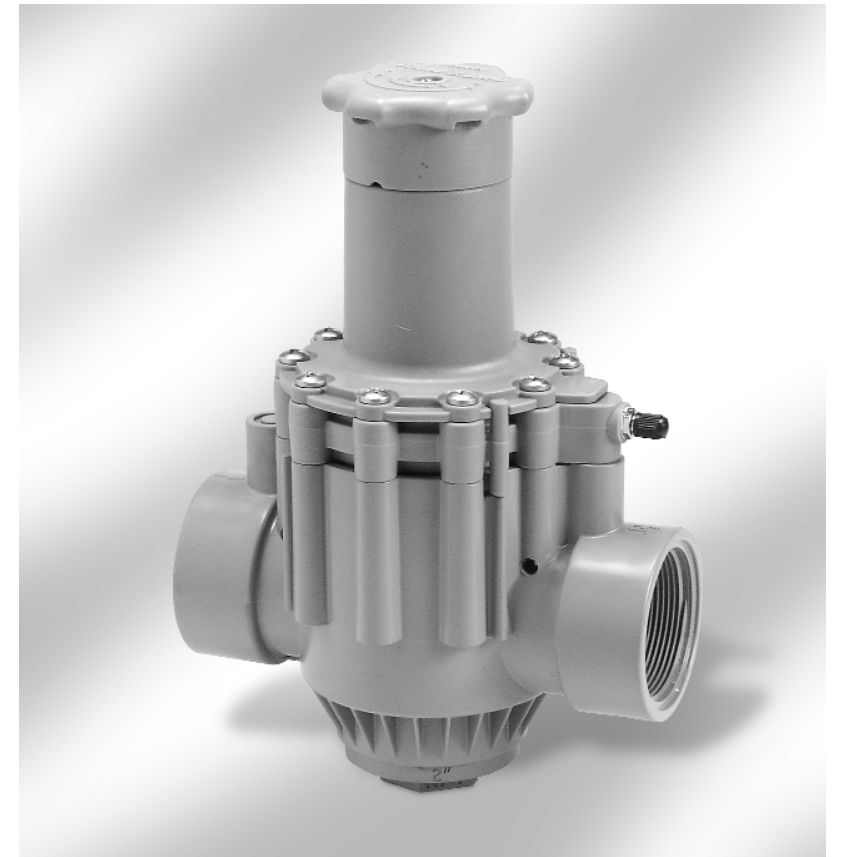
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## English 200PRV Valve

Thank you for purchasing a Rain Bird 200PRV valve. When a pressure reducing valve is desired for commercial irrigation purposes, Rain Bird's PRV pressure regulator provides quality, performance and economy. This normally open valve designed for point-of-connection applications is rugged and reliable. By reducing high inlet pressures to lower outlet pressures, the PRV improves irrigation system performance and conserves water.

### NOTES

- The PRV is shipped in a globe configuration and is designed for globe installation/operation only.

### Installation Refer to F1.

1. Flush main line thoroughly before installing the valve.
2. Use two wraps of Teflon tape along the full length of the inlet and outlet pipe threads. Do not apply pipe thread or pipe dope compound.
3. Thread inlet pipe into the inlet port of the valve **A** and hand tighten. Thread outlet pipe into the outlet port of the valve **B** and hand tighten. Tighten with wrench but do not exceed two turns beyond hand tight.

### Operating Instructions

The valve comes from the factory pre-set at 60 psi (4,1 bar) static outlet pressure. To change the outlet pressure setting, loosen the screw on the top of the valve handle **D** by turning one turn counter-clockwise. Connect a pressure hose gauge to the Schrader valve stem **C** located just above the outlet port of the valve **B**. Turn the handle **E** counter-clockwise to decrease the outlet pressure setting, or clockwise to increase the outlet pressure setting.

- The PRV is a normally open valve. It is not a control valve. Rain Bird recommends at least one on/off control valve before and/or after the PRV. Install a shut-off valve upstream of the PRV so water can be conveniently turned off if the regulator needs servicing.
- This valve should only be used on irrigation systems and should be installed downstream of the backflow prevention device (according to local code).
- Proper operation requires inlet pressure to be a minimum of 15 psi (1 bar) higher than desired outlet pressure.

4. Ensure inlet side is connected to main line. Note arrows on valve body indicating direction of water flow. Schrader valve **C** should be on the downstream side of the valve.
5. After installing the valve, slowly open the water supply at point-of-connection. Remember this is a normally open valve and water will continue to flow unless an on/off control valve is in place downstream.
6. For dirty water systems be sure to install a 100 mesh (or finer) WYE filter or screen filter before the PRV valve.

When the outlet pressure is at the desired setting, remove the pressure gauge from the valve stem and tighten the screw on the valve handle to lock-in the setting.

#### Operating Range:

Pressure: up to 200 psi (13,8 bar)  
 Regulation: 25 to 85 psi (1,7 bar to 5,9 bar)  
 Accuracy: ± 5 psi (0,3 bar)  
 Flow: up to 120 GPM (27,3 m<sup>3</sup>/h; 7,6 l/s)  
 Water temperature: up to 110° F (43° C)

## Troubleshooting Guide

### Difficulty adjusting valve to desired outlet pressure.

- Verify that the inlet pressure is at least 15 psi (1 bar) above the desired outlet pressure.
- Attempting to adjust the outlet pressure when the inlet pressure is too low can cause the valve spring to become fully compressed. This may deform and permanently damage the bonnet, thereby causing external leaks.

### With no downstream flow, the outlet pressure increases to equal the inlet pressure.

- Lock-up pressure is not in effect. The valve seat cannot fully close against the valve body throat.
- Check to see if there is debris lodged between the seat and the body throat.
- Check to see if the seat is damaged.

### Water leaks from the top of the bonnet, near the handle.

- Loose diaphragm lock nut. Remove the bonnet and tighten the nut to 25 inch-pounds of torque.
- Torn or damaged diaphragm. Replace the diaphragm.

### Water leaks from between the body and the bonnet.

- Bonnet retaining screws are loose. Re-tighten the screws.
- Valve spring is compressed to solid height by attempting to set the outlet pressure too high. Turn the adjustment handle counter-clockwise to

lower the outlet pressure setting, and verify that the inlet pressure is at least 15 psi (1 bar) above the desired outlet pressure.

### Water leaks from inlet or outlet threads.

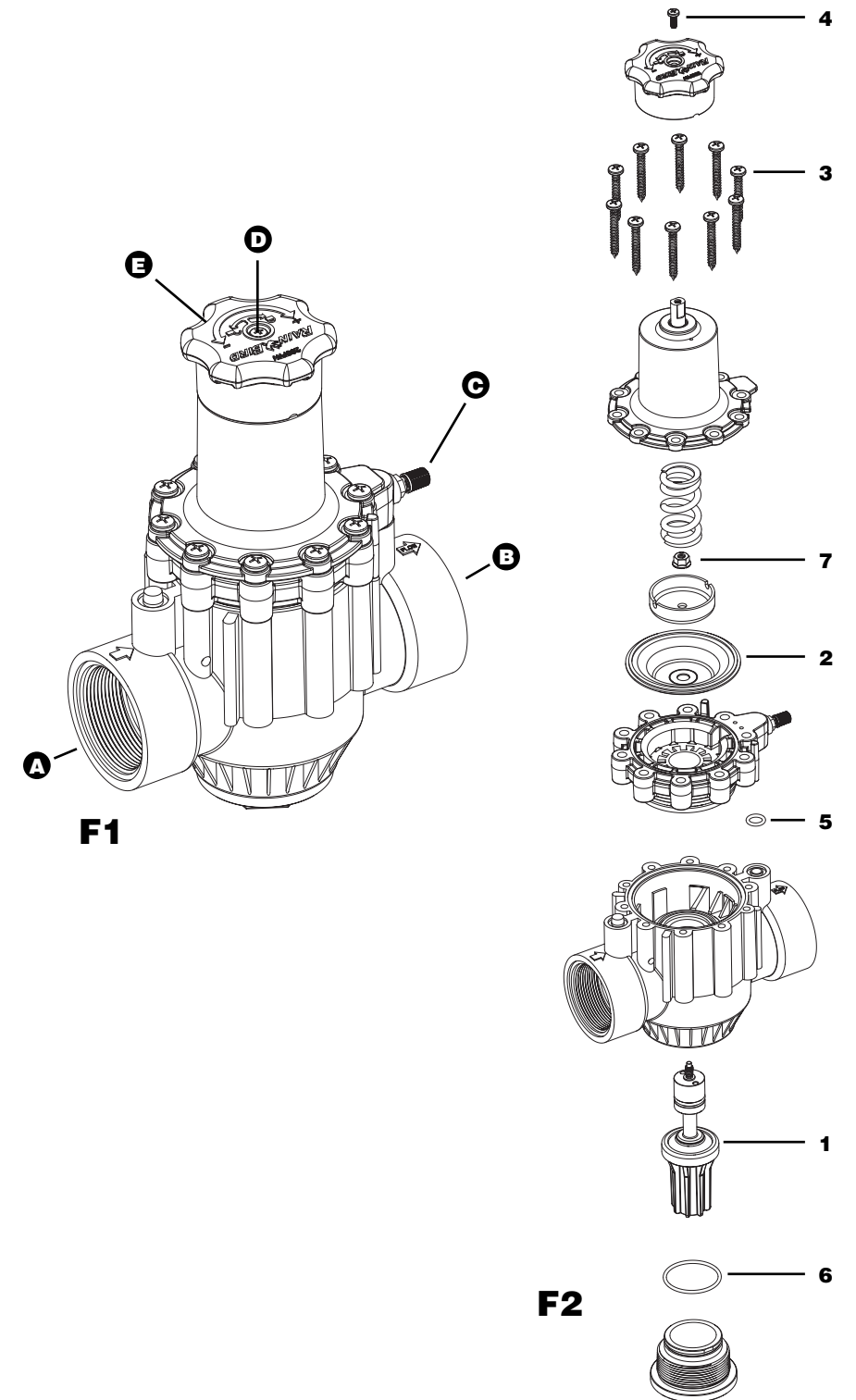
- Valve is not properly tightened on mating pipe threads. Re-tighten valve connections or re-connect valve to line according to installation instructions.
- Threads are damaged by cross-threading or contaminated by debris. Inspect threads and repair or clean as needed.

### Low or inadequate flow condition.

- System gate or master valve is not fully open. Locate the gate or master valve and open.
- Obstruction in the main pipeline. Isolate obstruction and remove.
- Water pressure is being used elsewhere on the site. Too many downstream control valves and sprinklers operating at one time. Do not exceed maximum flow capabilities.

### Technical Questions:

- Inside the U.S., please call Rain Bird Technical Services at (800) 247-3782 or the Rain Bird Spec Hotline at (800) 458-3005.
- Outside the U.S., please refer to the back page for contact information.
- Visit [www.rainbird.com](http://www.rainbird.com)



## Replacement Parts Refer to F2.

	200PRV		200PRV		
1	Poppet/Seat/Plunger Assembly	232295	5	O-Ring, Body	232299
2	Diaphragm	232296	6	O-Ring, Plug	232300
3	Bonnet Screws	232297	7	Locknut	204968
4	Handle Screw	232298			