



**BPES 3" Valve Pressure Loss**

Flow gpm	Globe psi	Angle psi	Flow m <sup>3</sup> /h	Flow l/m	Globe bar	Angle bar
60	6.6	6.8	13,6	227	0,46	0,47
80	5.1	5.9	24	400	0,19	0,21
100	3.2	3.5	36	600	0,14	0,14
120	1.8	1.8	48	800	0,21	0,19
140	1.8	2.1	60	1000	0,29	0,26
160	2.0	2.1	68	1136	0,34	0,31
180	2.2	2.0				
200	2.7	2.5				
250	4.0	3.4				
300	4.9	4.5				

**Notes**

1. Loss values are with flow control fully open
2. PRS-D pressure-regulating module recommended for all flow rates.

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## 300-BPES Valve Installation and Operation Guide



P/N 232095A

## 300-BPE and 300-BPES Valves

Thank you for purchasing a Rain Bird 300BPES valve for your irrigation system. This rugged valve combines a robust GFN bonnet with a strong red-brass body to provide a high quality product at a value price.

To use this guide, fold out the back page for visual reference then turn to the appropriate language. Follow the alphanumeric references for installation, adjustment, troubleshooting and replacement parts.

### NOTES

1. Product is shipped configured for globe installation. For [angle installation](#), use a closed-end wrench to remove the bottom plug **H** (avoid stripping the plastic bolt). Thread plug into the side inlet, which is opposite the side with the solenoid.

### Installation

 Refer to F1.

1. Apply two wraps of Teflon tape as a lubricant along the full length of the inlet and outlet pipe threads. Never apply pipe thread or pipe dope compound.
2. Thread main line into globe or angle valve inlet **A** and lateral line into valve outlet **B** until hand tight plus one to two more turns. Reference directional flow arrows located on the bonnet and body. Solenoid **C** is always above the outlet.

3. Connect one solenoid wire **D** to the controller common wire and the other solenoid wire **D** to the controller power wire. Tighten and protect using only approved watertight connectors.
4. Before system pressurization, open external bleed **E** to properly vent debris from clogging internal ports. Slowly open water supply to prevent water hammer. After one minute, close external bleed.

### Adjustment

 Refer to F1.

1. Using a 1½" or adjustable wrench, open the internal bleed feature by counter-clockwise loosening the solenoid adapter **F** one turn.
2. To optimize performance, use the flow control handle **G** to adjust the amount of water flowing through the valve. Counter-clockwise fully open the flow control. Clockwise turn the handle to decrease flow until resistance is felt, then counter-clockwise open one turn.

3. Close internal bleed by clockwise tightening the solenoid adapter **F**.
4. Refer to the controller operating instruction when programming the controller to automatically open and close the valve.

## Troubleshooting

### Valve will not open

1. Ensure main water supply is on. Ensure upstream valves are open. Ensure flow control stem **G** is not closed.
2. If valve only opens with manual bleed, ensure controller is programmed to activate the proper zone valve. Test controller power output and service if necessary. Test solenoid **C** power input.
  - a) If controller and solenoid power are detected, there may be debris in the solenoid assembly.
  - b) Persistent problem may be an obstruction lodged in main pipe.
  - c) If power is detected at the controller and not the solenoid, inspect and repair damaged lead wires.

### Valve will not close

1. Ensure controller is not operating the valve automatically. Ensure manual internal bleed is off by clockwise tightening the solenoid adapter **F**. Ensure manual external bleed is off by clockwise tightening the bleed screw **E**.
2. Turn off water supply and swap solenoid **C** from an operational valve; replace solenoid if necessary.
3. Turn off water supply and verify that the solenoid adapter **F** o-ring is not damaged; replace if necessary. Check for debris in solenoid bowl preventing plunger from creating a positive seal.
4. Check overall system water-pressure requirements and ensure that multiple zone valves are not operating simultaneously. Disallowing one zone valve to close before another opens can reduce the amount of backpressure needed to close the diaphragm.

5. Turn off water supply and remove bonnet **I** for possible debris or damage causing the diaphragm to stick open.

### Leakage

1. Disassemble parts and inspect o-rings/sealing surfaces for damage.

### Accessories or persistent problems

1. Outside the US, please refer to the back page for contact information.
2. Always visit us at [www.rainbird.com](http://www.rainbird.com).

## Accessories

PRS-Dial  
TBOS™ DC Latching Solenoid

