Valve Troubleshooting

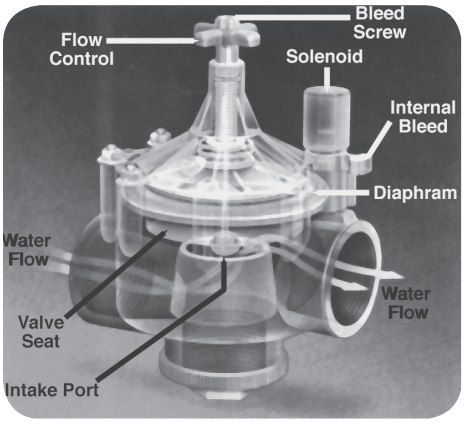
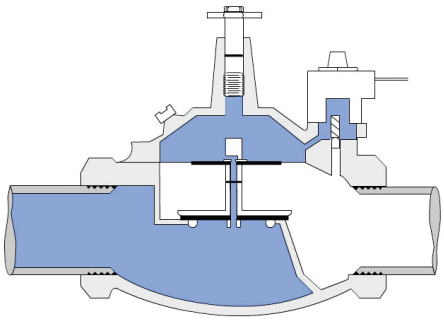
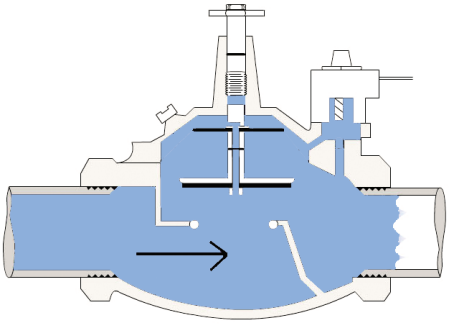


Illustration showing parts of a valve



Cutaway diagram showing valve closed



Cutaway diagram showing valve open

Do this first...

1. Verify that water is on and all isolation valves are open.

2. Verify that controller is plugged in and correctly programmed.

3. Verify that the valve's flow control stem is open.

4. Test the valve's manual bleed. If the valve operates correctly, the problem may be with the controller or wiring.

Problem: Won't close

Symptom: *Water flows continuously*

Physical obstruction
- Debris wedged between valve seat and the rubber seat washer
- Damaged or worn seat or washer

Hydraulic function
- Flow and pressure above or below manufacturers' recommendation
- Improperly adjusted flow control stem
- Torn diaphram
- Missing diaphram spring
- Inlet port plugged with debris; corrosion or mineral deposits on metering rod
- Solenoid assembly
  - –Plunger spring missing, bound, weak or damaged
  - –Missing plunger
  - –Plunger stuck in up position (bent or grit wedged between the plunger and plunger tube.)
  - –Plunger seat damaged or corroded

Electrical
- Continuous voltage output from controller (See *Using Volt-Ohm Meter,* available free on the web or in stores)

Problem: Won't close fully

Symptom: Water continues to weep from heads or emitters after irrigation cycle ends

Physical obstruction
- Debris wedged between valve seat and the rubber seat washer
- Damaged or worn seat or washer

Hydraulic function
- Solenoid assembly
  - –Grit wedged between the plunger and plunger seat
  - –Plunger seat damaged or corroded
  - –O-ring damaged or twisted
  - –Internal bleed slightly raised

Electrical
- Continuous voltage output from controller (See *Using Volt-Ohm Meter,* available free on the web or in stores, or click link)

Problem: Won't open

Symptom: *No water during irrigation cycle*

Hydraulic function
- Flow control turned completely off
- Outlet port plugged or restricted
- Torn diaphram (reverse flow only)
- Solenoid plunger stuck in down position

Electrical
- Solenoid defective or burned out
- Field wiring defective
- Defective underground wiring connections
- No output from controller

Tip: *Try switching solenoids with a working adjacent valve.*

Tip: *Move wire at controller to terminal that you know is good.*

Problem: Won't open fully

Symptom: *Heads don't pop up fully even with new wiper seals*

Hydraulic function
- Flow control turned down too low
- Corrosion or mineral deposits on metering rod

Electrical
- Solenoid defective
- Field wiring defective
- Defective underground wiring connections
- Weak output from controller

What if it still doesn't work?

- Globe valves usually have easily replaceable external parts and diaphram kits
- Valve actuators take more time to service; often replacement is more cost effective than repair especially for older units.

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