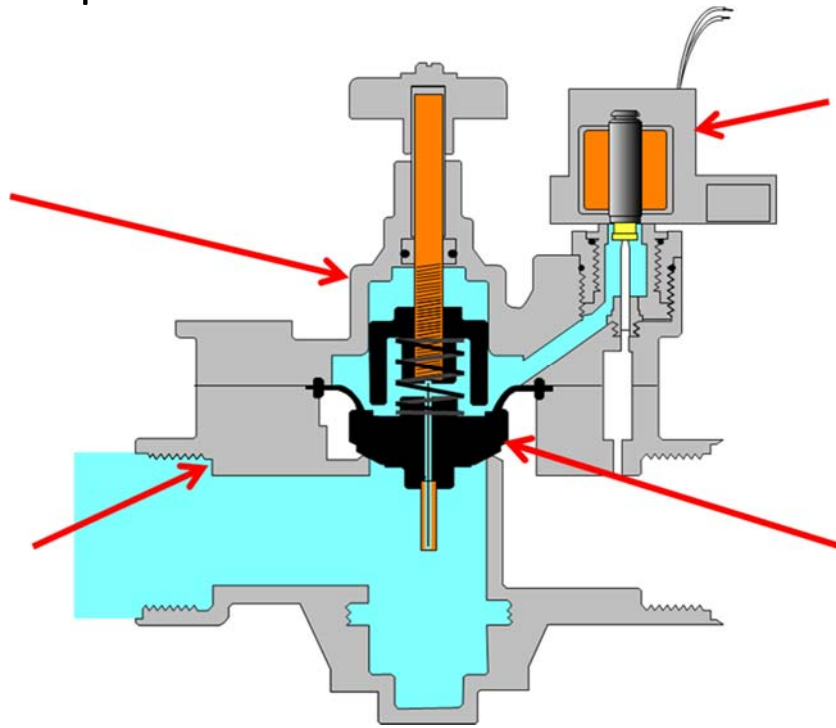
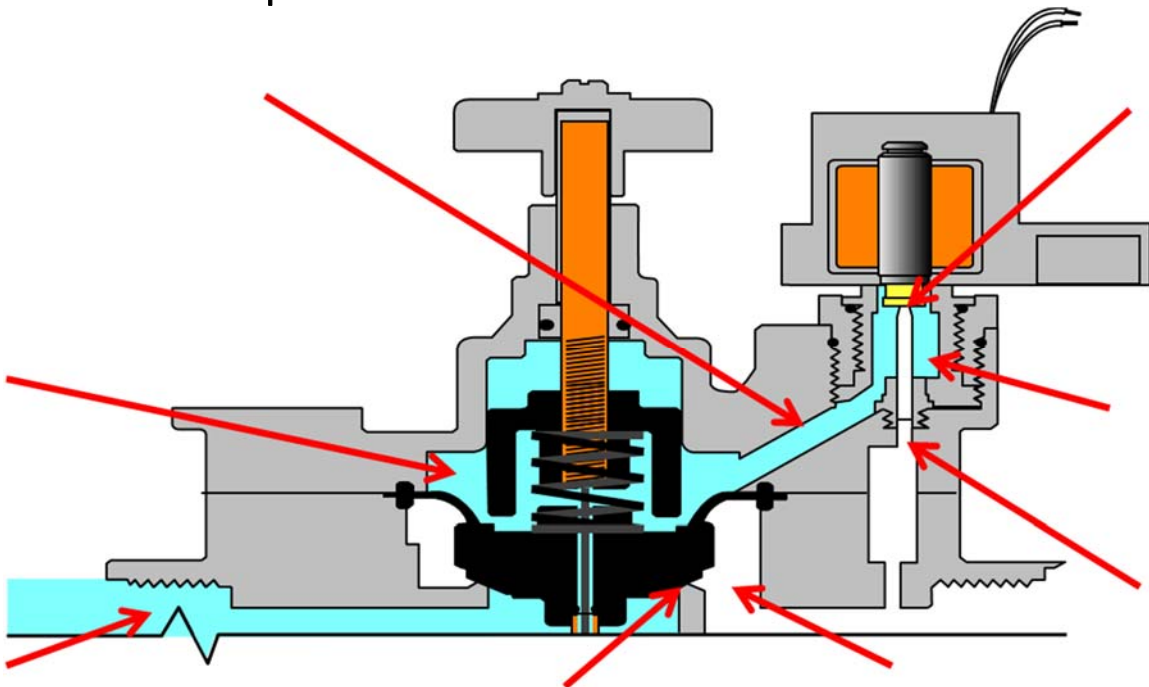


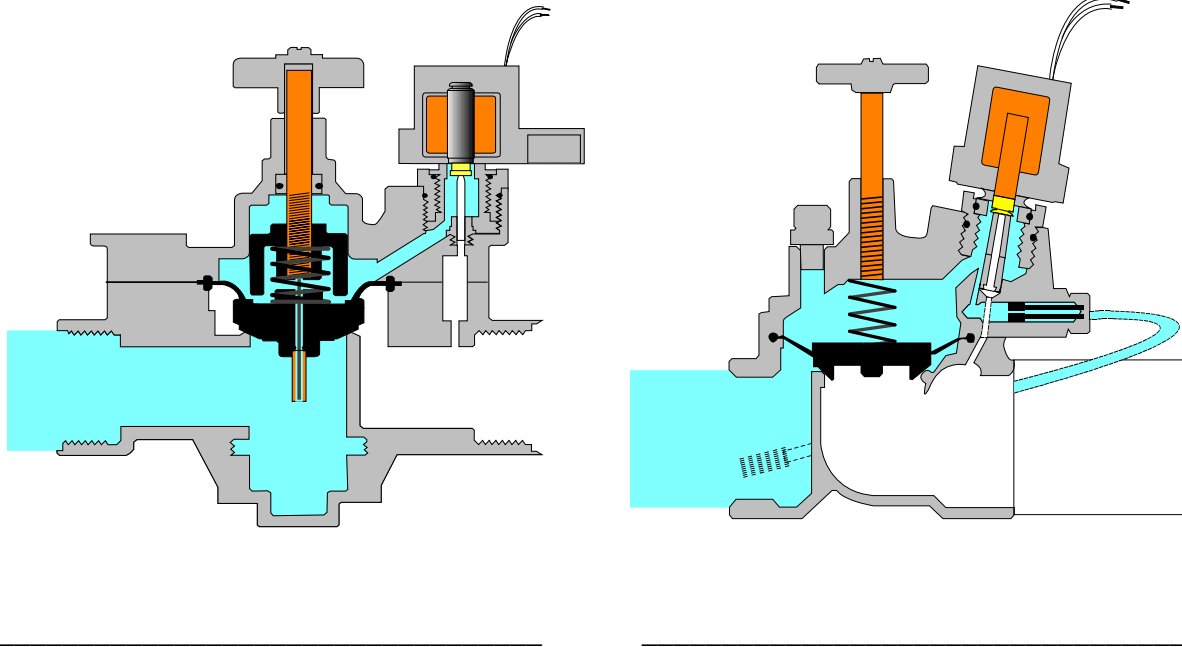
Major Valve Components



Internal Valve Components



Valve Construction



Label the valve diagrams above as a FORWARD FLOW or a REVERSE FLOW valve.

The difference between a forward flow valve and a reverse flow valve is that if the valve diaphragm is damaged with a large hole, a forward flow valve will fail in the _____ position and a reverse flow valve will fail in the _____ position.

Valve Operation

_____ = PRESSURE X SURFACE AREA

There are three common methods to open an irrigation valve:

1. _____
2. _____
3. _____

Valve Failure: Valve Will Not Open

The primary cause of ANY valve failure is _____

Troubleshooting Checklist:

- DEBRIS or CORROSION in the solenoid core tube that will not allow the plunger to move freely

- DEBRIS that is blocking the flow of water through the solenoid port

- DEBRIS that is blocking the flow of water through the exhaust port

- A LARGE HOLE in the diaphragm of a reverse flow valve

- FLOW CONTROL STEM is closed 100%

Valve Failure: Valve Weeps When Closed

The way to identify water collecting around the top of the sprinkler heads on a zone as a valve failure and not a broken sprinkler head or low-head drainage is to determine how long it has been since the last time the valve was operated. If the water is collecting around the top of the sprinkler heads at all times, the problem is with the irrigation valve.

Troubleshooting Checklist:

- DEBRIS stuck between the valve diaphragm and the diaphragm seat

- A SMALL HOLE in the valve diaphragm of a forward flow valve

- The valve DIAPHRAGM SEAT has been damaged

- The valve SOLENOID SEAT has been damaged

Valve Failure: Valve Stuck Open

Before troubleshooting a valve failure, ensure the problem is actually with the valve and not an electrical current coming from the irrigation controller. Disconnect the field control wire from the station terminal; if the valve stops running, the problem is in the controller.

Troubleshooting Checklist:

- Ensure the valve SOLENOID is fully tightened in place

- DEBRIS or CORROSION in the solenoid core tube that will not allow the plunger to move freely

- A LARGE HOLE in the diaphragm of a forward flow valve

- PILOT FLOW FILTER is clogged with debris