



SUPERIOR

INSTALLATION INSTRUCTIONS: MODEL 3100- NORMALLY OPEN

The model 3100 performs in the opposite manner of a normally closed electric valve with electricity required to close the valve rather than open it. During the time the solenoid is not energized, the Model 3100 will remain open.

If the Model 3100 is used as a master valve, then the MV circuit to which it is connected must be set to operate a normally open valve.

INSTALLATION

1. Install the Model 3100 valve in line making sure the flow of water is in the direction of the arrow.
2. Do not apply pipe dope on female threads inside valve body. Pipe dope should only be applied to make threads on pipe. For plastic pipe, Teflon tape is preferred.
3. Verify that the Model 3100 will close when energized. This can be done by first opening a zone valve manually so that watering can be observed. Watering should stop after the Model 3100 is energized.

OPERATING PRESSURE RATING: 20 psi to 150 psi.

For pressure over 150 psi, please consult with your distributor.

TROUBLE SHOOTING MODEL 3100 VALVES

I. VALVE CLOSSES WHENEVER CONTROLLER ENERGIZES A STATION.

1. **Master valve circuit is also energized causing normally open master valve to close.** Follow wiring and/or programming instruction included with controller for connecting to and operating a normally open master valve.

II. VALVE WILL NOT SHUT OFF

1. **Solenoid coil is not energized.** Place you hand on solenoid coil. If there is no vibration and/or humming, then one of the following problems exists:
 - a. No station output at controller.
 - b. Broken wire between valve and controller.
 - c. Bad solenoid coil. To replace solenoid coil, see SOILENOID DISASSEMBLY INSTRUCTIONS, below.
2. **Malfunctioning solenoid.** Disassemble solenoid (see SOLENOID DISASSEMBLY INSTRUCTIONS, below) and check for the following:
 - a. Debris in solenoid plunger cylinder. Clean as necessary.
 - b. Stuck plunger. If plunger cannot be freed up by cleaning, then replace stem and plunger assembly.
 - c. Defective plunger seat. A small rubber seat should be visible on top side of plunger (a larger rubber seat is on bottom side). If the rubber seat appears to be missing, replace the plunger.
3. **Debris under rubber seat disc in valve.** Remove diaphragm assembly form valve body (see VALVE DISASSEMBLY INSTRUCTIONS, below). Check for debris embedded in rubber seat disc of diaphragm assembly and for debris down in the valve body. If rubber seat disc is deformed due to embedded debris, replace it (or flip it over and re-assemble if deformity is minor).

SOLENOID DISASSEMBLY INSTRUCTIONS

1. Shut off water supply to valve.
2. Unscrew compression fitting from elbow at top of solenoid.
3. Unscrew spacer nut. It is not necessary to unscrew elbow form spacer nut.
4. Using a screwdriver, unscrew solenoid post form valve body. Caution: solenoid plunger will drop out of cylinder at bottom of solenoid post. Take care to prevent plunger form falling to ground.
- 5.

VALVE DISASSEMBLY INSTRUCTIONS

1. Shut off water supply to valve.
2. Remove hex bolts from valve bonnet.
3. Lift bonnet from valve body. If the bonnet id difficult to remove, turn flow control handle down (clockwise) until bonnet cracks loose from diaphragm.
4. Remove spring from top of diaphragm assembly. Keep in mind that the small end of spring faces down.
5. Remove diaphragm assembly.