

Installation Operation Maintenance (IOM) 900 Series Manual On-Off Valve

Description

Toro's new 900 series valves have a cutting-edge, patent-pending hydrodynamic valve seat design that creates an easier path for water flow through the valve, reducing pressure loss and allowing the irrigation system to reach operational flow rates more efficiently. The valve is opened and closed using a 3-way manual selector.



Installation

- 1) The valve can be installed both horizontally or vertically.
- 2) Ensure enough space nearby for installation and adjustment.
- 3) Flush the pipeline before installing the valve to ensure clean water flow.
- 4) The line flow direction should match the arrow on the valve.
- 5) Inspect the valve post installation for any loose or damaged fittings.
- 6) Install a pressure gauge upstream or use a pressure checkpoint on the valve to set the desired pressure.
- 7) Installing isolation valves upstream and downstream is recommended for maintenance.
- 8) Cross-check solenoid specifications with design requirements and solenoid/coil labels.

Initial Startup and Adjustment

- 1) Fully open the upstream isolation valve (if installed).
- 2) Turn the 3-way manual selector to "CLOSE".
- 3) Slowly open the downstream isolation valve (if installed) and allow the line downstream of the valve to fill up.
- 4) Turn the 3-way manual selector to "OPEN"
- 5) Now, slowly open the downstream isolation valve, making sure there is sufficient flow demand after the valve.

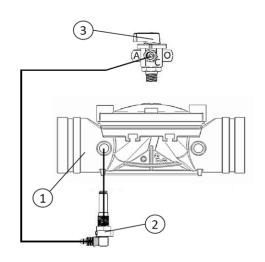
Maintenance

- 1) Regular periodic valve inspection should be done to check for any damage or leakage through valve connection and fittings.
- 2) Inspect and clean the in-line finger filter as water quality dictates. This should be done once every few months.
- 3) Check valve performance by periodically checking the upstream pressure gauge and adjusting it if required.
- 4) In case the valve requires the replacement of internal worn parts or elastomers, follow the steps below:
 - a) Disassemble necessary control tubing.
 - b) Open the screws and remove the cover unit from the valve body.
 - c) Replace the worn parts and assemble them as before. Ensure to lubricate nuts and bolts with anti-seize grease.

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Control Loop

No	Description		
1	Main Valve		
2	Inline Finger Filter		
3	3-Way Manual Selector		



Troubleshooting

Problem	Cause	Check	Solution
Valve does not open.	The 3-way selector ("4") is set to close.	Verify knob position.	Turn selector to "Auto".
	Inlet pressure is too low.	Check the inlet pressure.	Increase inlet pressure.
Valve does not close.	3-way selector is in the "Open" position.	Verify knob position.	Turn selector to "Auto" or "Close" position.
	Blocked inline finger filter (2).	Disconnect upstream tube. No firm water stream.	Clean or replace the filter.
	Debris on the sealing seat.	Valve is constantly discharging small amount of water.	Turn the 3-way selector (4) to "Open" for a few minutes and then to "Close". If the problem persists, dismantle, clean and check that parts are not damaged.
	Damaged diaphragm.	Continuous water discharge.	Replace the diaphragm.

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