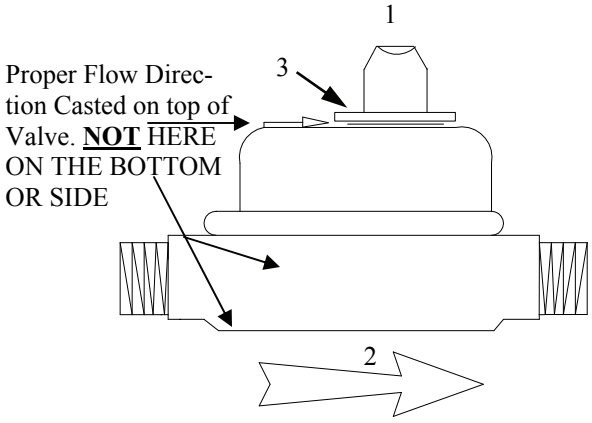
Installation / Operation / Maintenance

BERMADON -Volumetric Shut-Off Valve
Models 1106MT/1106MTA

PARTS LIST
1. Setting Knob
2. Bermadon Volumetric Control Valve
3. Volume Dial Face



DESCRIPTION

The Model 1106-MT/MTA volumetric shut-off valve is designed to meter the amount of total volume delivered through the valve. After the valve delivers the preset volume, the valve closes drip-tight. The Valve is dial/impeller controlled, hydraulically operated and dial/plunger actuated. When volume exceeds dial setting, the main valve closes to maintain volume set point. When volume is below the preset dial setting, the main valve is fully open until the set volume is delivered.

INSTALLATION

1. Allow enough room around the valve assembly for making adjustments and for future maintenance and disassembly work.

2. Thoroughly flush the pipeline to remove dirt, scale, and debris. Failure to perform this operation may render the valve inoperable.

3. It is recommended that isolation valves be installed upstream and downstream of the Bermadon control valve to allow for future maintenance operations.

4. Install the valve in the pipeline with the valve flow arrow on the **top** of the body casting in the proper direction. Apply sealant/teflon tape to the male threaded end connections. Install the valve horizontally with the cover up for best performance. Make certain the valve is positioned so the valve can be easily removed for future maintenance requirements. SEE ABOVE SCHEMATIC FOR REFERENCE.

5. After installation carefully inspect/correct any damaged accessories, piping, connections or fittings.

IN LINE STATIC TEST

Open Valve Static Test

1. Turn setting knob (1) on valve CCW off of zero (see dial face 3) to open the valve.

2. CAUTION: This will allow the valve to fully open. Make sure this condition will not cause system damage.

3. Check for leaks at the flange connections, fittings, etc.

Closed Valve Static Test

1. Turn setting knob (1) counter-clockwise to zero until the valve clicks, dial face is on zero (3) and valve closes to stop flow through the valve.

2. Check the valve cover and the threaded end connections for leaks. Tighten end connections and cover bolts/nuts if necessary.

START-UP OPERATION

NOTE: There must be available flow through the valve and system to check and adjust valve. Insure that a downstream demand is created by opening field valves, sprinklers, etc.

1. Close main valve by fully turning setting knob (1) on top of the valve counter-clockwise until dial face (3) is on zero and clicks.

2. Open fully the upstream gate valve but open gate the downstream gate valve only approximately 10% (if applicable). Main valve should remain closed.

3. Slowly turn setting knob (1) on top of the valve by pushing down on the knob (1). Turn it counter-clockwise to the desired volume on the dial face (3) aligning the desired volume with the arrow on the cover of the valve (see the above drawing). Open the downstream gate valve fully (if applicable) and valve should open completely for normal operation.

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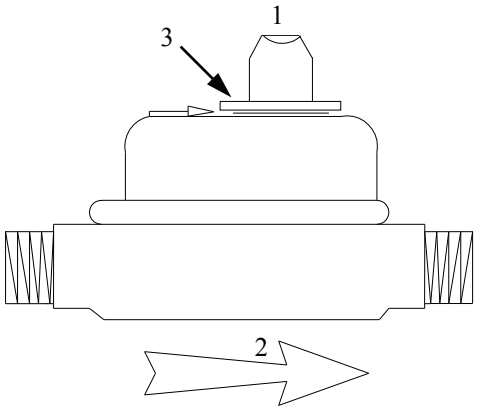

TROUBLESHOOTING

SYMPTOM	CAUSE	REMEDY
Valve Fails to Open	Insufficient inlet pressure.	Check/create inlet pressure.
	No downstream demand.	Create demand/flow.
	Dial set on zero.	*Turn setting knob (1) CCW off of zero to desired volume on the dial face (3).
	Valve not installed in the proper flow direction.	Make sure flow arrow on **top** of the valve is pointing towards downstream (see above drawing).
Valve Fails to Close or Meter	Debris trapped in main valve.	Remove valve from line and flush out with clean water. Clean out/inspect inlet and outlet port holes.
	Orifice fitting plugged (Low-Flow models only).	Remove valve and clean (Same as Above).
	Valve pulsates or meters incorrectly.	Bleed air from lines, high points in the system and/or from the valve end connections. Ensure flow rate is above recommended minimum.
	Main valve leaking.	Max. pressure rating for valve is 90psi. Remove valve to inspect cover screw/nut tightness and thrd. end connections for serviceability. Apply tape and/or sealant.
	System is not within valve parameters.	Make sure flow rates/pressures are within the valves parameters of valve model. MT models 2.5 GPM - 22 GPM and MTA lo-flow models 0.5 GPM – 9 GPM. Make sure there is a minimum pressure of 7psi when valve is open and flowing.

***CAUTION:** Make sure the setting knob is pushed down before setting volume or valve internals could be damaged.