

# Information Sheet

## AutoPrime™ Valve



### Features:

- Automatic Priming
- Anti-Siphon (Air Gap Device)
- Acrylic or PVC Construction
- Automatically Regulates Pump Output
- Field Retrofittable - All LiquiPro Liquid Ends
- Vertical Discharge Design

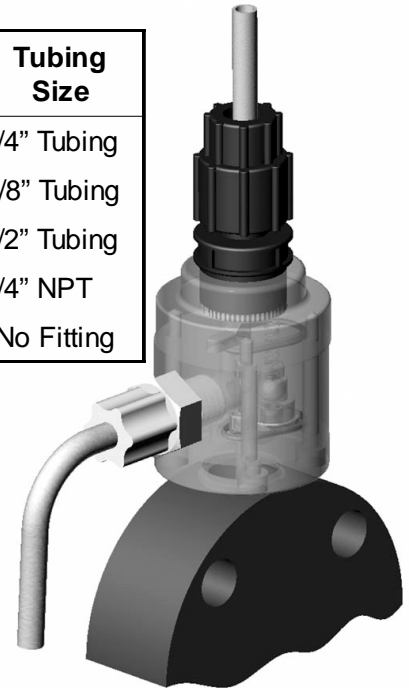
LMI's AutoPrime valve allows for constant removal of vapors and gasses inherent with Sodium Hypochlorite or Hydrogen Peroxide. The valve keeps the pump primed automatically and functions as an air gap anti-siphon valve. In addition, pump output is regulated by venting the discharge to atmosphere during each stroke, eliminating the need for a back pressure device.

*Note: AutoPrime valve will recirculate approximately 10-20% of discharge material back to the supply. Pump output should be adjusted accordingly.*

*NSF Approval Pending.*

*\*No fitting on discharge side - for use with LMI multi-function valve.*

Acrylic Part No.	PVC Part No.	Tubing Size
38721	38789	1/4" Tubing
38722	38790	3/8" Tubing
38723	38791	1/2" Tubing
38724	38792	1/4" NPT
38538	38794	*No Fitting



### Specifications:

**Flow Range:** 0.08 - 5.05 ml/stroke max. pump output  
8.0 gph (30.0 l/h)

**Stroke Rate:** 5 - 100 per minute

**Stroke Length:** 30 - 100%

**Max. Pressure:** 300 psi

### Materials:

**Body and Caps:** Acrylic or PVC

**Balls and Seat:** Ceramic, Viton, PVC and Polyprel

**Spring:** Hastelloy C

**Fasteners:** 316 Stainless Steel



8 Post Office Square  
Acton, MA 01720 USA  
TOLL FREE: (800) 564-1097  
TEL: (978) 263-9800  
FAX: (978) 264-9172  
<http://www.lmipumps.com>



Replaces same of Rev. D 6/02  
1962.E 7/02

# Instruction Sheet

## AutoPrime Valve

### Installation:

1. Be sure the o-ring seal at the bottom of the AutoPrime valve is in place.
2. Install the AutoPrime valve by screwing it into the head clockwise until it bottoms firmly. **DO NOT USE A PIPE WRENCH OR TOOLS TO TIGHTEN.**
3. Connect the return line tubing to the AutoPrime valve. Route the tubing back to the solution reservoir taking care not to submerge the tubing in the solution. **NOTE: THE TUBING MUST BE VENTED TO ATMOSPHERE IN ORDER FOR THE VALVE TO FUNCTION PROPERLY.**
4. Connect all other suction and discharge tubing prior to start up.
5. Set pump settings (stroke and speed) to 100% and start the pump.
6. The pump is primed when solution begins to exit the return line.

### Operation:

The new valve consists of four functional elements. They are the *vent check valve*, the *discharge check valve*, the *anti-siphon check valve* and the *return line*.

1. **Vent Check Valve** - Provides constant removal of the gases generated when using such fluids as Sodium Hypochlorite or Hydrogen Peroxide as they are drawn into the suction line of the pump. If the pump remains idle for a length of time upon re-start, the vent check valve will allow gases to escape around the valve and into the vent/return line, re-priming the pump. Once re-primed, a maximum of 20% of the pumped solution escapes into the return line.
2. **Discharge Check Valve** - Once the vent check valve is seated, the internal pressure inside the pump head will open the discharge check valve, which is spring loaded. This will allow the fluid to exit the AutoPrime valve to discharge. The valve design regulates the output at lower pressures, preventing over pumping and eliminating the need for a back pressure device.
3. **Anti-Siphon Check Valve** - In addition, the valve contains an anti-siphon feature that opens the valve to atmosphere, should a vacuum be introduced above the AutoPrime outlet discharge valve, creating an air-gap condition through the vent/return line, rather than from the solution supply.
4. **Return Line** - This is the tubing that **MUST** be connected to the vent port of the vent check valve. The tubing **MUST** be routed back to the solution source to allow the re-pumping of the vented solution. The end of the tubing **MUST** be positioned above the highest fluid level in the reservoir to allow the anti-siphon feature of the AutoPrime to function properly.

