

# LiquiPro® 3-Function Valve

# For 300/400 Series Cartridge Valve Type Liquid Ends

## **Priming**

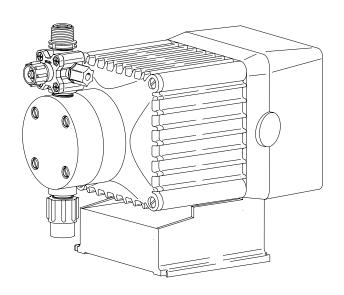
Priming the pump can be accomplished by a simple 1/4 turn of the Relief Knob. Prime your LMI pump while it is connected to a pressurized line.

### **Pressure Relief**

Provides protection against excessive system pressure.

### Line Depressurization

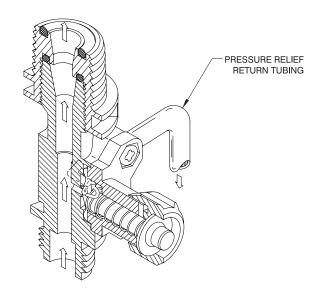
By opening the Relief Valve, the discharge line will depressurize without having to loosen or disconnect discharge tubing.



Valve	Wetted Materials		
Number	Body	Diaphragm	"O" Ring
49146	PVDF		Polyprel <sup>®</sup>
49147	PVDF	Fluorofilm™	PTFE
49148	PVC		Polyprel <sup>®</sup>

Part numbers are for 300/400 Series LiquiPro® cartridge valve type Liquid Ends only.

Valves supplied with a pump include connections as specified by pump model number. All valves sold as separate accessories are supplied with 1/2" NPT connection. For tubing connection, order one of the following kits:



### **Connection Kits**

Kit #	LMI Tubing Size	Contents		
77378	3 x 6 mm	1 Knob, 1 Ferrule		
77379	6 x 8 mm	1 Knob, 1 Ferrule		
77380	9 x 12 mm	Insert, 1 Sleeve		
77382	1/4"	1 Knob, 1 Ferrule		
77383	3/8"	1 Knob, 1 Ferrule		
77384	1/2"	Insert, 1 Sleeve		



201 Ivyland Road Ivyland, PA 18974 USA TEL: 215-293-0401 FAX: 215-293-0445

http://www.lmipumps.com



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### METHOD OF OPERATION

### A. PRIMING

- 1. Connect return tubing to (relief) port.
- 2. Route tubing to solution tank. Be sure the end of tubing is above the maximum solution level (Do not submerge tubing in solution).
- 3. Turn Relief Knob 1/4 turn to open.
- 4. Set pump at 100% speed and 100% stroke. Start pump. When solution begins to flow through translucent return tubing, the pump is primed.
- 5. Stop pump. Turn Relief Knob 1/4 turn to close.

#### NOTE:

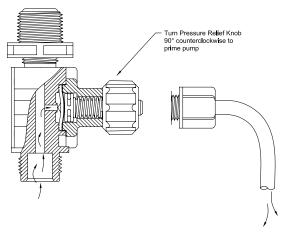
- (a) Pump is normally self-priming if suction lift is no more than 5 ft (1.5 m), valves in the pump are wet with water (pump is shipped from factory with water in pump head) and the above steps (A1 through A4) are followed.
- (b) If the pump does not self prime, remove 3-function valve and Discharge Cartridge Valve, and pour water or solution slowly into discharge port until it is filled. Replace Cartridge Valve, and follow steps A1 through A4 thereafter.

### **B. DEPRESSURIZING DISCHARGELINE**

1. It is possible to depressurize discharge line and pump head without removal of tubing or loosening of fittings.

Be sure injection check valve is properly installed and is operating. If a gate valve or globe has been installed downstream of the injection check valve, it should be closed. Be certain return tubing is connected and run to solution supply tank.

2. Turn Relief Knob 1/4 turn to open.



- 3. Solution should exit the return tubing. The discharge line is now depressurized.
- 4. If injection check valve is of higher elevation than pump head, disconnecting tubing at injection check valve end will allow air to enter and cause solution to drain back to tank.

