

For use on LMI Series A, and B chemical metering pumps.

**CAUTION**  
When pumping chemicals make certain that all tubing is securely attached to the fittings. It is recommended that tubing or pipe lines be shielded to prevent possible injury in case of rupture or accidental damage. Always wear protective clothing when working on or near chemical metering pumps.

# MR LIQUID HANDLING ASSEMBLY

## A. INSTALLING INJECTION CHECK VALVE

1. The injection check valve should always be installed as close as possible to the point of chemical injection, at the very end of the piping run.

**CAUTION**  
*Do not operate pump using MR Liquid Handling Assembly without injection/anti-syphon valve properly installed if pressure at point of injection is less than 10 psi (0.7 Kg/cm<sup>2</sup>) otherwise overpumping and/or syphoning will occur.*

2. Purpose of injection/anti-syphon valve is to prevent backflow from treated line and to prevent syphoning or overpumping of chemical

## B. Connecting Discharge Pipe

Note: corrosion resistant, 1/4" Schedule 80 pipe should be used. Do not use 1/8" pipe.

1. Discharge valve has 1/4" NPT male outlet. A 1/4" union should be connected to both discharge valve so that chemical metering pump may be removed without disturbing piping.

It is recommended that Teflon tape be used on tapered pipe threads so that there is a leakproof seal without over-tightening of fittings.

## C. CONNECTING SUCTION TUBING

1. Cut suction tubing to length necessary between suction valve of chemical metering pump and foot valve. Foot valve should just sit at the bottom of chemical container. Maximum recommended vertical suction lift is 5 ft. (1.5m)

Route tubing from foot valve to chemical metering pump making sure it does not touch hot surfaces, sharp surfaces, or is bent so sharply that it kinks.

2. Slide small end of coupling nut onto tubing.
3. Push tubing over tapered nozzle of pump head so that tubing flares out and reaches the shoulder. (If tubing is stiff from cold, dip end in hot water.)
4. Slide coupling nut until threads are engaged. Tighten by hand until tubing is held securely in place.

**CAUTION**  
*Excessive force will crack or distort fittings. DO NOT USE PIPE WRENCH.*

5. Follow the same procedure for connecting tubing to foot valve.
6. If a suction tube straightener is desired, one may be fabricated from a 3 ft. (1m) piece of 1/2" Schedule SDR 13.5 (thin wall type) PVC pipe.
7. Dip end of PVC pipe in hot water for at least 1 minute.
8. Push pipe over small end of coupling nut.

## D. PRIMING

1. Temporarily loosen the union on top of discharge valve.
2. Set pump at near maximum (80%) speed and 100% stroke and start pump.

**CAUTION**  
*"B" series stroke cannot be adjusted until pump is operating electrically. Push and turn lower knob while unit is stroking.*

3. As soon as chemical begins to leak at the union on top of discharge valve, stop the pump.
4. The pump is now primed.
5. Tighten union on top of discharge valve.



**NOTE**  
Maximum pump pressure rating is reduced by 25 psi (1.7 bar) with anti-syphon spring installed.

**PARTS LIST**  
**MR LIQUID HANDLING**  
**ASSFMBLY**

KEY PART NO. NO.	DESCRIPTION	QTY.
1	25237 Injector Fitting w/ Nozzle	1
2	10339 Spring, Teflon PFA Coated	1
3	25235 Ball, Hastelloy	4
4	10407 Seal Ring, Teflon	4
5	10492-1 Valve Seat, Gray PVC	1
6	10493-1 Valve Housing, Gray PVC	1
7	10213 Head, PVC	1
8	10302 Liquifram, Teflon Face	1
9	10340 Screw, 10-24 x 3/4 S.S.	4
10	10322 Weight, Ceramic	1
11	10978 Foot Valve Seat, Polypropylene	1
12	25243 Injection Anti-Syphon Assembly	1
13	25241 Discharge Valve Assembly	1
14	25240 Head Assembly, MR	1
15	10292 Valve Seat, PVC	1
16	10299 Coupling Nut, PVC	2
17	25242 Suction Valve Assembly	1
18	25244 Foot Valve Assembly	1
19	10342 Tubing, Polyethylene 3/8" OD x 1/4" ID	10 ft.
20	10293 Valve Housing, Gray PVC	1
21	10123 Strainer, White Polypropylene	1
22	25238 Needle Valve	1

