

# LE-77

## LIQUID HANDLING ASSEMBLY

### 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 pump.

### MATERIALS OF CONSTRUCTION

|            |            |
|------------|------------|
| Fittings   | 316 S.S.   |
| Seal Rings | Teflon     |
| Balls      | 316 S.S.   |
| Head       | 316 S.S.   |
| Liquifram  | Teflon     |
| Suction    | 1/4" NPT F |
| Discharge  | 1/4" NPT F |

### A. INSTALLING INJECTION CHECK VALVE

(Optional - Not included with standard pump.)

1. The injection check valve should always be installed as close as possible to the point of chemical injection, at the end of the piping run.
2. Purpose of injection/anti-syphon valve is to prevent backflow from *treated line* and to prevent syphoning or overpumping of chemical.
3. A 1/2" NPT female fitting with sufficient depth will accept the injection/anti-syphon valve.

### B. CONNECTING DISCHARGE PIPE

*NOTE: Type 316 stainless steel or other corrosion resistant 1/4" Schedule 80 pipe should be used. DO NOT USE 1/8" PIPE.*

1. Discharge valve has a 1/4" NPT female outlet. A short 1/4" pipe nipple and a 1/4" union should be connected to both discharge and suction valves 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 overtightening of fittings.*

### C. CONNECTING SUCTION PIPE

1. Using the same size and material pipe as used on discharge line, cut suction pipe to required length.
2. It is recommended that Teflon tape be used on tapered pipe threads so that there is a leakproof seal without overtightening of fittings. Suction side leaks are invisible, but if present will cause pump to suck in air during each suction stroke.
3. Maximum recommended vertical suction lift is 5 ft. (1.5m).

### D. PRIMING

1. Temporarily disconnect the union on top of discharge valve.
2. Set pump at 80% speed and 100% stroke and start pump.
3. As soon as chemical begins to leak at the union on top of discharge valve, stop the pump.
4. Pump is now primed.
5. Tighten union on top of discharge valve.



**LMI**  
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**NOTE:**

Threaded connections into pump head are 3/4"-16 straight threads.  
**Do not use Teflon tape.** These joints are sealed by seal ring valve seats (item 5 on exploded view).

Maximum pump pressure rating is reduced by 25 psi (1.7 bar) with back pressure spring installed.

**Do not remove back pressure spring if pressure at injection point is less than 20 psi (1.4 bar).**

| KEY NO. | PART NO. | DESCRIPTION                       | QTY. |
|---------|----------|-----------------------------------|------|
| 1       | 10638    | Head Assembly, LE-77              | 1    |
| 2       | 10635    | Discharge Valve Assembly          | 1    |
| 3       | 10491    | Valve Housing, 316 S.S., 1/4" NPT | 1    |
| 4       | 10659    | Ball, 316 S.S.                    | 2(4) |
| 5       | 10407    | Seal Ring, Teflon                 | 2(4) |
| 6       | 10604    | Head, S.S., 1.8 SI                | 1    |
| 7       | 10340    | Screw, 10-24 x 3/4" PH S.S.       | 4    |
| 8       | 10305    | Liquifram 1.8 SI, Teflon          | 1    |
| 9       | 10636    | Suction Valve Assembly            | 1    |
| 10      | 10490    | Valve Seat, 316 S.S., 1/4" NPT    | 1(2) |
| 11      | 10634    | Inj/Back Pressure Valve Assembly* | (1)  |
| 12      | 10494    | Injector Fitting*                 | (1)  |
| 13      | 10339    | Spring, Teflon PFA coated         | (1)  |
| 14      | 25880    | Valve Housing, Foot*              | (1)  |
| 15      | 26881    | Valve Seat, Foot*                 | (1)  |
| 16      | 26227    | Foot Valve Assembly               | (1)  |

\*Optional extra

( )Quantities with Optional part no.'s 10634 & 26227

### SPARE PARTS KITS

For LE-77, order SP-77 which includes:

4 ea. 10659 Ball, S.S.

4 ea. 10407 Seal Ring, Teflon

1 ea. 10305 Liquifram

