

# Liquid End Sheet

## LE-217/LE-257/LE-277/LE-297

When pumping solutions, 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 and face shield when working on or near your metering pump.

**Note: See parts list for materials of construction**

### A. INSTALLING INJECTION CHECK VALVE

1. The purpose of the injection check valve is to prevent backflow from the treated line.
2. A 1/4" NPT female fitting with sufficient depth will accept the injection check valve.
3. To insure correct seating of the ball inside the injection check valve, the injection check valve should be installed upwards (vertically) into bottom of the pipe.

### B. CONNECTING DISCHARGE PIPE

**NOTE:** Corrosion resistant 1/4" Schedule 80 or Schedule 120 should be used. **DO NOT USE SMALLER PIPE SIZES.**

1. Discharge valve has a 1/4" NPT male outlet. A short 1/4" NPT union should be connected to both discharge and suction valves so that the metering pump may be removed without disturbing piping.
2. It is recommended that Teflon<sup>®</sup> tape be used on tapered pipe threads so that there is a leakproof seal without overtightening of fittings.

**Excessive force will crack or distort fittings.  
DO NOT OVERTIGHTEN.**

### C. CONNECTING SUCTION PIPE

1. Using the same size and material pipe as used on the discharge line, cut the suction pipe to length so that the foot valve is positioned just above the bottom of the solution container. Maximum recommended vertical suction lift is 5 ft (1.5 m).

2. It is recommended that Teflon<sup>®</sup> 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 pump stroke.

### D. PRIMING

1. Temporarily disconnect the union at the end of the discharge pipe run.

**NOTE:** Stroke cannot be adjusted until pump is operating electrically. Turn lower knob while unit is stroking.

2. Start pump. Set at 80% speed and 100% stroke.
3. As soon as solution begins to enter the discharge pipe, stop the pump.
4. The pump is now primed.
5. Reconnect union at the end of the discharge pipe.

### NOTE:

- (a) Pump is normally self-priming if suction lift is not 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 (**D. Priming**) are followed.
- (b) If the pump does not self prime, remove discharge valve housing and ball, and pour water or solution slowly into discharge port until head is filled. Follow step **D. Priming** thereafter.



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KEY NO.	PART NO.	DESCRIPTION	LE-217 (3.0 SI)	LE-257 (0.5 SI)	LE-277 (1.8 SI)	LE-297 (0.9 SI)
1 *	32514	Injection Check Valve Asm.	(1)	(1)	(1)	(1)
2	32519	Head Asm., LE-217	1	-	-	-
	32516	Head Asm., LE-257	-	1	-	-
	32518	Head Asm., LE-277	-	-	1	-
	32517	Head Asm., LE-297	-	-	-	1
3	32509	Head, 3.0 SI, 316 SS	1	-	-	-
	32506	Head, 0.5 SI, 316 SS	-	1	-	-
	32508	Head, 1.8 SI, 316 SS	-	-	1	-
	32507	Head, 0.9 SI, 316 SS	-	-	-	1
4 *	32515	Check Valve Asm., 316 SS	2 (1)	2 (1)	2 (1)	2 (1)
5	31419	Liquifram™, 3.0 SI, Fluorofilm™	1	-	-	-
	30916	Liquifram™, 3.0 SI, Fluorofilm™	-	1	-	-
	31420	Liquifram™, 3.0 SI, Fluorofilm™	-	-	1	-
	30917	Liquifram™, 3.0 SI, Fluorofilm™	-	-	-	1
6 †	10340	Screw, 10-24 x .75 PH SS	4	4	4	4

\* Quantities shown in ( ) indicate optional valve assemblies not included with standard Liquid Handling Assemblies.

† For use with LMI Series M Metering Pumps, order part number 30856, Screw, 10-24 x 1.5 PH SS, 4 each.

FITTINGS WITH PIPE OR TUBING - CUSTOMER SUPPLIED -

**OPTIONAL INJECTION CHECK VALVE**

NOTE: Spring loaded Injection Check Valve - opening pressure is approximately 20 psi (1.4 Bar)

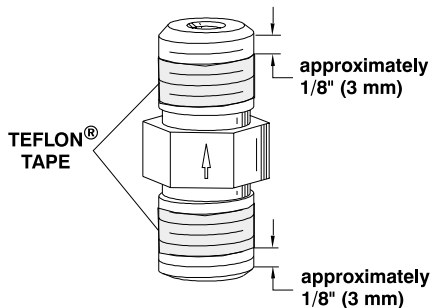
5 NOT INCLUDED IN 2

† All connections are 1/4" NPT M.

Teflon® tape is required on all 1/4" NPT M fittings to insure a tight seal.

All valves must be installed so that the flow direction arrow points upward.

**APPLY TEFLON® TAPE AS SHOWN HERE**



FITTINGS WITH PIPE OR TUBING - CUSTOMER SUPPLIED -

