

LE 91A LIQUID HANDLING ASSEMBLY

For Series A & B
with 0.9 Liquifram

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

Fittings	PVC/Polypropylene
Seal Rings	Teflon
Balls	Ceramic
Head	Acrylic
Liquifram	Teflon Face
Suction	.375" OD Vinyl
Discharge	.375" OD Polyethylene

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 tubing run.
2. Purpose of injection/back pressure 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/back pressure valve.
4. In order to insure correct seating of the ball inside the check valve, the injection/back pressure valve should be installed upwards.

B. CONNECTING DISCHARGE TUBING

Note: Discharge tubing is relatively stiff translucent tubing.

1. Route tubing from injection check 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 discharge valve housing so that tubing flares out and reaches the shoulder. (If tubing is stiff from cold, dip end in hot water.)
4. Slide down the coupling nut until threads are engaged. Tighten by hand until tubing is held securely in place.

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

5. Follow the same procedure for connecting tubing to injection valve.

C. CONNECTING SUCTION TUBING

1. Cut suction tubing to a length such that the foot valve hangs just above the bottom of the chemical container. Maximum recommended vertical suction life is 5 ft. (1.5m).
2. Follow same procedure (see B) in connecting suction tubing to suction valve and foot valve.
3. 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.
4. Dip end of PVC pipe in hot water for at least 1 minute.
5. Push pipe over small end of coupling nut.

D. PRIMING

1. Temporarily remove tubing from injection/back pressure valve and hold the end of tubing so it is above pump level.
2. Set pump at 80% speed and 100% stroke and start pump.
3. As soon as chemical is visible through translucent discharge tubing just past the discharge valve, stop the pump.
4. Pump is now primed.
5. Reconnect tubing to injection/back pressure valve.

Note:

- (a) Pump is normally self-priming if suction lift is no more than 5 ft. (1.5m), valves in the pump are wet with water (Pump is shipped from factory with water in pump head) and the above steps (D1 thru D3) are followed.
- (b) If the pump does not self prime, remove discharge valve housing and ball and pour water or chemical slowly into discharge port until it is filled. Follow steps D2 thru D5 thereafter.



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1. Maximum pump pressure rating is reduced by 25 psi (1.7 bar) with back pressure spring installed.
2. Do not remove back pressure spring if pressure at injection point is less than 20 psi (1.4 bar).

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 (Ref. No. 4 on exploded view).

LE 91A

Part No.	Description	Quantity
10361	Injection Nozzle	1
10339	Spring, Teflon PFA coated	1
10338	Ball, Ceramic	4
10407	Seal Ring, Teflon	4
10292	Valve Seat, PVC or Polypropylene	2
10299	Coupling Nut, gray PVC	4
10342-10	Tubing, Polyethylene, .375" OD	1
10293	Valve Housing, PVC or Polypropylene	2
10113	Head, Acrylic, machined	1
10302	Liquifram, 0.9 SI Teflon Face	1
10340	Screw, 10-24 x 3/4" S.S.	4
10322	Weight, Ceramic	1
10978	Foot Valve Seat, black Polypropylene	1
10123	Strainer, white Polypropylene	1
25670	Injection/Anti-Syphon Valve Assembly	1
25231	Discharge Valve Assembly	1
25232	Suction Valve Assembly	1
25234	Foot Valve Assembly	1
10505	Head Assembly	1
26136	Clamp Ring	3
10469-06	Tubing, Vinyl, .375" OD	1

