

LE 151A 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.

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 check valve is to prevent backflow from treated line.
3. A 1/2" NPT female fitting with sufficient depth will accept the injection check valve.
4. In order to insure correct seating of the ball inside the check valve, the injection check valve should be installed upwards.

B. CONNECTING DISCHARGE TUBING

Note: Cut tubing to length needed for discharge line making sure sufficient amount is left for suction line.

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 lift is 5 ft. (1.5m).

MATERIAL

Fittings	GFR Polypropylene
Seal Rings	Polyprel™
Balls	Ceramic
Head	GFR Polypropylene
Liquifram	PFA
Suction	.250" OD Vinyl
Discharge	.250" OD Polyethylene

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 3/4" Schedule 80 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 check valve and hold the end of tubing so it is above pump level.
2. Set pump at maximum 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 check 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 therefore valves are wet), 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.



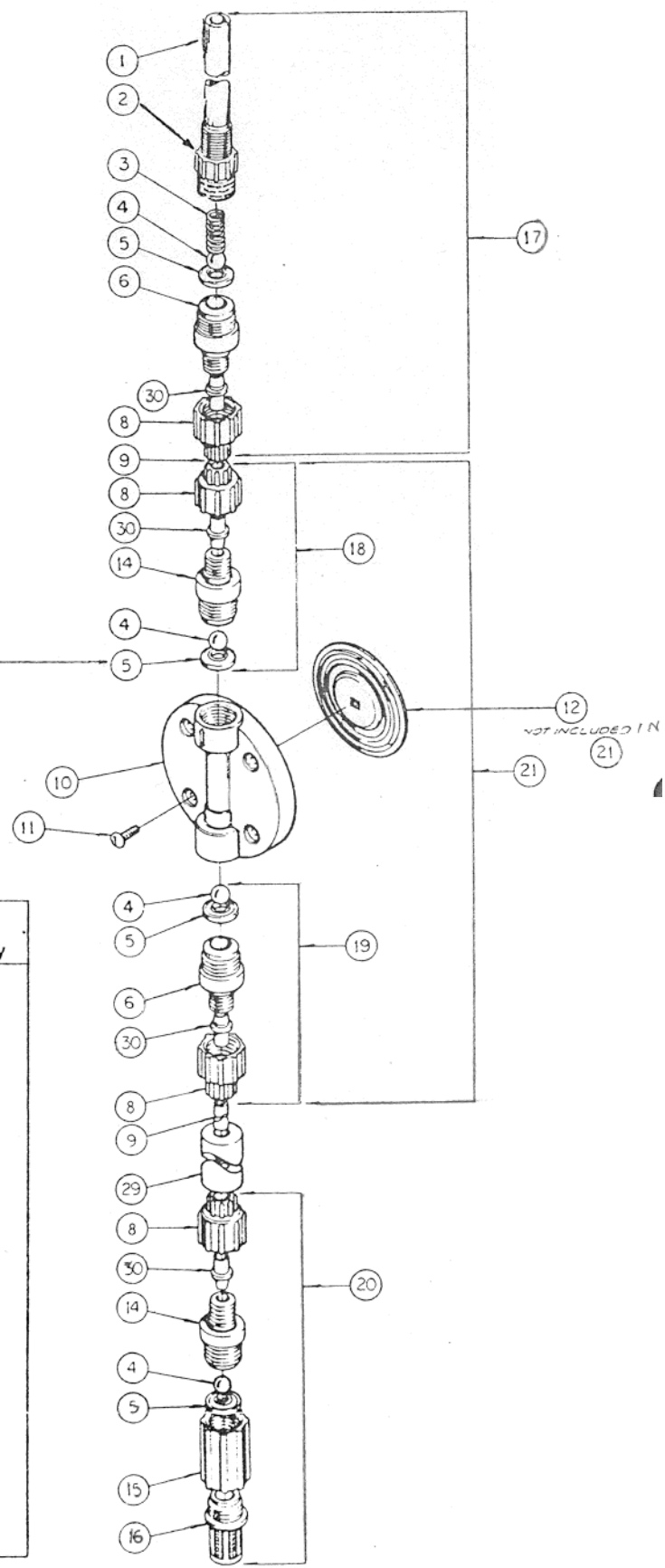
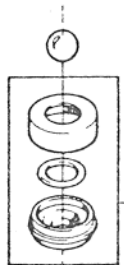
LIQUID METRONICS INCORPORATED

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NOTE:
 Threaded connections into pump head are 1/4"-16 straight threads. **Do not use Teflon tape.**
 These joints are sealed by seal ring valve seats (Item 5 on exploded view).

1. Maximum pump pressure rating is reduced by 25 psi (1.7 bar) with back pressure spring (Item 3 on exploded view) installed.
2. Do not remove back pressure spring if pressure at injection point is less than 20 psi (1.4 bar).

SEAL RING
 DETAIL



LE 151A

Ref. No.	Part No.	Description	Quantity
1	10356	Injection Nozzle	1
2	29961	Injector Fitting, CFR Kynar® PVDF	1
3	10339*	Spring	1
4	10338*	Ball, ceramic	4
5	29443*	Seal Ring, Polyprel™ (See Detail)	4
6	28664	Valve Seat, CFR Kynar® PVDF	2
8	10299	Coupling Nut	4
9	25636-16	Tubing, .250" OD polyethylene	1
10	29608	Head, 0.5SI, CFR Kynar® PVDF	1
11	10340	Screw, 10-24 x 3/4" S.S.	4
12	26042*	Liquifram, 0.5SI Teflon	1
14	28665	Valve Housing, CFR Kynar® PVDF	2
15	10978	Foot Valve Seat	1
16	10123	Strainer, polypropylene	1
17	28301	Injection Check/Back Pressure Valve Asm.	1
18	28041	Discharge Valve Asm.	1
19	28040	Suction Valve Asm.	1
20	28038	Foot Valve Asm.	1
21	28074	Head Asm., LE 152	1
29	10322	Weight, ceramic	1
30 -	28663	Ferrule	4

*Parts included in Spare Parts Kit No. SP-U8
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