

# Liquid End Sheet

## LE-40 / LE-44 / LE-45

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**

### WARNING



**A PRESSURE RELIEF VALVE WITH A RELIEF PRESSURE OF 150 PSI MAXIMUM AND A RELIEF FLOW (BLEED) RATE OF 4 GPM MINIMUM MUST BE INSTALLED IN THE DISCHARGE LINE OF THIS PUMP.** Discharge piping should have a minimum burst pressure of 600 psi. Failure to provide pressure relief may result in failure modes dangerous to the system, associated piping, the pump itself and operating personnel.



#### A. INSTALLING INJECTION CHECK VALVE (Optional)

1. The purpose of the injection check valve is to prevent backflow from the treated line.
2. A 3/4" 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 3/4" Schedule 80 should be used.  
**DO NOT USE SMALLER PIPE SIZES.***

1. Discharge valve has a 3/4" NPT male outlet. A short 3/4" 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 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 AND FOOTVALVE (OPTIONAL)

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 (optional) 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 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 knob to 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. (1.5m), 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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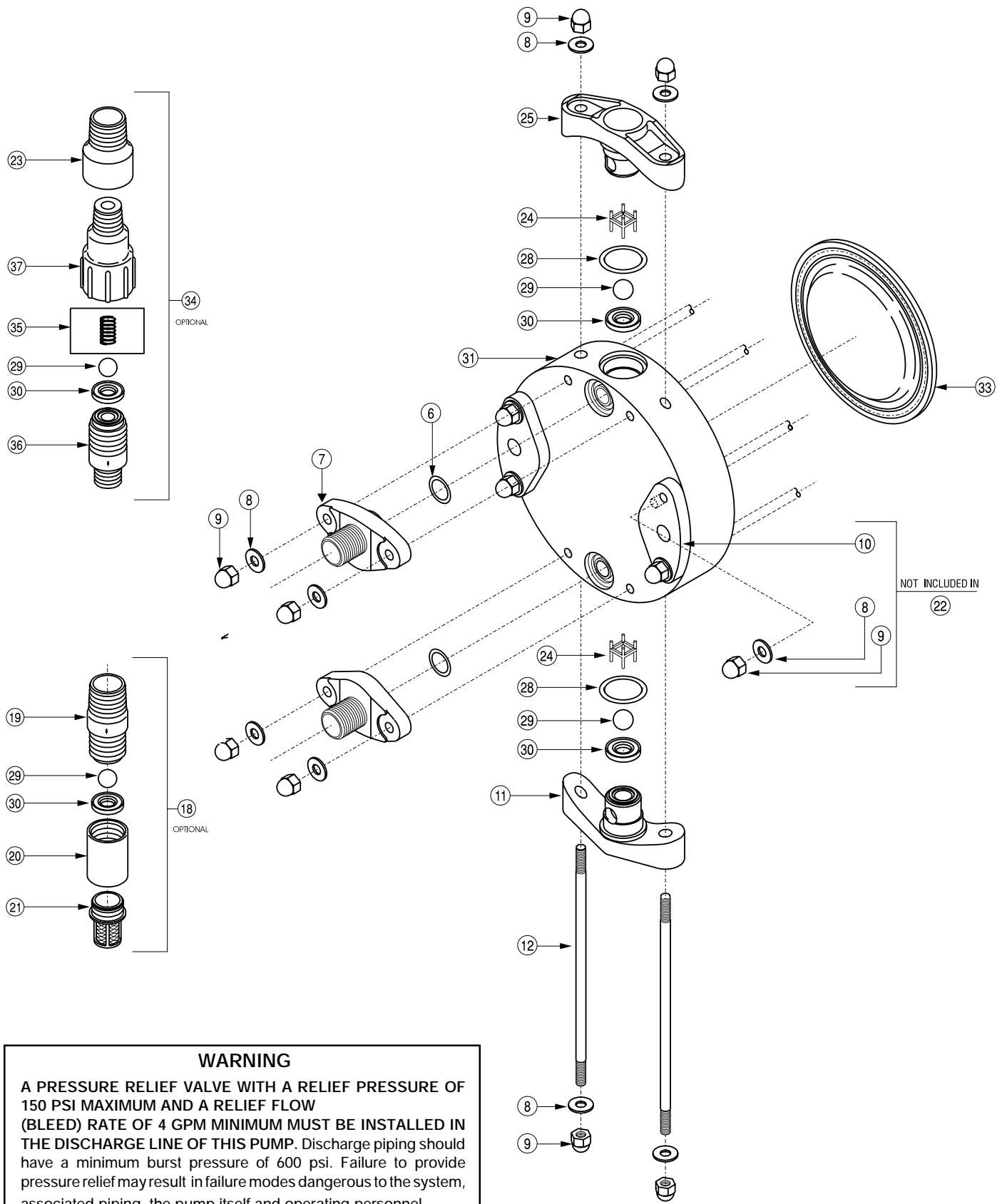
KEY NO.	PART NO.	DESCRIPTION	QUANTITY		
			LE-40	LE-44	LE-45
6	25895* + ~	O-Ring, Viton	2	2	2
7	26045-1	Fitting, 3/4" NPT, Polypropylene			2
	31211	Fitting, 3/4" NPT, PVDF	2	2	
8	26169	Washer, SS	12	12	12
9	25754	Cap Nut, 1/4 - 20 SS	12	12	12
10	26562	Plate, PP	2	2	2
11	25893	Suction Valve Seat, Polypropylene			1
	31208	Suction Valve Seat, PVDF	1	1	
12	26185	Stud	2	2	2
18**	26698	Foot Valve Assembly**	1		
	26699	Fooy Valve Assembly**		1	
	26700	Foot Valve Assembly**			1
19	27024	Valve Housing, 3/4" NPT PVC**	1	1	
	27033	Valve Housing, 3/4" NPT Polypropylene			1
20	25600	Foot Valve Seat, Polypropylene	1	1	1
21	10123	Strainer, Polypropylene**	1	1	1
22	26598	Head Assembly , LE-40	1		
	26599	Head Assembly , LE-44		1	
	26600	Head Assembly , LE-45			1
23	26672	Fitting, 3/4" x 1/2" NPT PVC	1	1	
	29593	Fitting, 3/4" x 1/2" NPT PVDF			1
24	26323	Ball Guide, Polypropylene	2	2	2
25	25894	Plug, Polypropylene			1
	31209	Plug, PVDF	1	1	
28	26151* + ~	O-Ring Viton	2	2	2
29	10138* + ~	Ball Ceramic .500"	4	4	4
30	10128*	Seal Ring, Hypalon	4		
	10228 +	Seal Ring Viton		4	
	25128 ~	Seal Ring Teflon			4
31	25186	Head, 12.0 SI, Acrylic	1		
	26525	Head, 12.0 SI PVC		1	
	26681	Head, 12.0 SI, Polypropylene			1
33	26119*	Liquifram, 12.0 SI, Hypalon	1		
	26319 + ~	Liquifram, 12.0 SI, Teflon Face		1	1
34**	26675	Injection Valve Assembly**	1		
	26674	Injection Valve Assembly**		1	
	26673	Injection Valve Assembly**			1
35	10339	Spring, PVDF**	1	1	1
36	27001	Valve Seat, 3/4" NPT PVC**	1	1	
	27032	Valve Seat, 3/4" NPT Polypropylene**			1
37	25108	Injector Fitting, Polypropylene**	1	1	1
	26140* + ~	O-Ring (not shown)	8	8	8

\* Parts included in Spare Parts Kit Sp-40

+ Parts included in Spare Parts Kit Sp-44

~ Parts included in Spare Parts Kit Sp-45

\*\* Optional parts not included in Liquid End





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