

# PULSAtron®

## SERIES E, A PLUS, AND C PLUS SPECIFICATIONS

### GENERAL

Chemical metering pumps shall be positive displacement non-hydraulic, solenoid driven, diaphragm type pumps. Output shall be "hot" rated (at operating temperature) and shall be adjustable while pumps are in operation. Positive flow shall be ensured by a minimum of four ball type check valves. A bleed valve shall be provided for the manual evacuation of entrapped air or vapors and safe relief of pressure in the discharge line.

### CONTROLS (standard)

The control panel shall be located opposite the liquid handling end of pump. Output volume adjustments shall be made by independent dial knobs for stroke length and stroke rate.

### EXTERNAL PACING (optional for Series C Plus and A Plus)

Pump control shall be selectable between manual and external by means of a 2 position switch. In external mode, the pump shall accept non voltage contact closures (ex: contacting flow meter). As contact closes, the pump shall stroke once, minimum contact closure time is 10 msec. Contact must open and close for each pump stroke. Maximum closures - 125 per minute.

### LIQUID LEVEL/STOP FUNCTION (optional for C Plus and A Plus)

A dry contact closure from a liquid level control or external device to the stop function shall cause the pump to halt operation and illuminate a red indicator light on the pump control panel. The pump shall resume normal operation when contact opens.

### AGENCY LISTINGS (all models)



### SERIES E

Water resistant and available in eight models:  
5 and 11 GPD at 250 PSI  
6, 12, and 21 GPD at 150 PSI  
12, 24, and 44 GPD at 100 PSI  
Capable of handling viscosities of up to 10,000 CPS with spring loaded connections.

### SERIES C PLUS

Water resistant and available in four models:  
6, 12, 22, and 30 GPD at 80 PSI

### SERIES A PLUS

Water resistant and available in four models:  
6 and 12 GPD at 150 PSI  
22 and 30 GPD at 100 PSI

### ELECTRONIC DRIVE

To prevent damage to pump from over heating, the solenoid shall have automatic reset thermal overload protection. For overpressure conditions, pump shall automatically stop pulsating when discharge pressure exceeds pump pressure rating by not more than 35% when pump is set at maximum stroke.

The electronic circuitry shall be EMI resistant and shall employ a metal oxide varistor (MOV) for lightning protection. A replaceable fuse mounted on the pump's printed circuit board accessible from inside the pump shall provide circuit overload protection.

Internal wiring between electronic circuit board, solenoid, and power shall be quick disconnect terminals at least 3/16" wide.

### ENCLOSURE

Pump drive shall be encased in a water resistant housing constructed of a chemically resistant glass filled polyester. The electronic circuitry shall be mounted at the rear of the pump for maximum protection against chemical intrusion.

### MATERIALS OF CONSTRUCTION

**Pump Head** - GFPPL, PVC, SAN, PVDF, 316SS

**Diaphragm** - Teflon faced, hypalon backed

#### Check Valves

- Seats/O-Rings - Teflon, Hypalon, Viton

- Balls - Ceramic, Teflon, 316SS, Alloy C

- Housing - GFPPL, PVC, PVDF, 316SS

**Bleed Valve** - GFPPL, PVC, PVDF

**Tubing** - Suction 4 ft. PVC

- Discharge 8 ft. PE

Important: Material Code - GFPPL = Glass-filled Polypropylene, PVC = Polyvinyl Chloride, SAN = Styrene-Acrylonitrile, PE = Polyethylene, PVDF = Polyvinylidene Fluoride. Teflon, Hypalon and Viton are registered trademarks of E.I. DuPont Company.

### NOTES:

- Pump heads in SAN are not available on pump models rated above 100 PSI.
- Bleed valve not available on pumps configured for high viscosity or NPT connections.
- Tubing may be supplied in PVDF, Polypropylene, or black U.V. inhibited PE.
- **Externally paced models are not available with agency listings.**
- **External pacing is not available on Series E models.**

## SPECIFICATIONS

### SERIES E

### SERIES A PLUS

### SERIES C PLUS

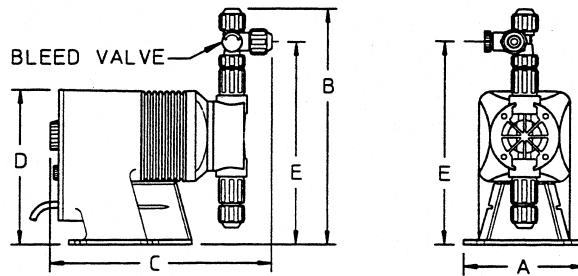
MODEL	LE12	LE02	LE33	LE13	LE03	LE34	LE14	LE44
Capacity GPD	5	6	11	12	12	21	24	44
nominal	0.2	0.25	0.45	0.5	0.5	0.87	1	1.83
(max.)	18	22	41	45	45	79	90.8	166
Pressure PSIG	250	150	250	150	100	150	100	100
(max.)	17	10	17	10	7	10	7	7
Connections: Tubing	1/4" ID X 3/8" OD 3/8" ID X 1/2" OD 3/16" ID X 5/16" OD							
Piping	1/4" FNPT							
Reproducibility at max. capacity	+/- 3%							
Viscosity Max CPS	1000 For Viscosity > 1000 see notes							
Stroke Frequency Max SPM	125							
Stroke Frequency Turn-Down Ratio	10:1							
Stroke Length Turn-Down Ratio	10:1							
Power Input	115 VAC/50-60 HZ/1 ph 230 VAC/50-60 HZ/1 ph							
Average Current Draw @ 115 VAC: Amps	0.6							
@ 230 VAC: Amps	0.3							
Peak Input Power Watts	130							
Average Input Power @ max SPM: Watts	50							

LB02	LB03	LB04	LB64
6	12	22	30
0.25	0.5	0.91	1.25
22	44	83	113.5
150	150	100	100
10	10	7	7
1/4" ID X 3/8" OD 3/8" ID X 1/2" OD 3/16" ID X 5/16" OD 1/4" FNPT			
+/- 3%			
1000			
125			
10:1			
10:1			
115 VAC/50-60 HZ/1 ph 230 VAC/50-60 HZ/1 ph			
0.6 0.3			
130			
50			

LD02	LD03	LD04	LD54
6	12	22	30
0.25	0.5	0.91	1.25
22	44	83	113.5
80	80	80	80
5.6	5.6	5.6	5.6
1/4" ID X 3/8" OD 3/8" ID X 1/2" OD 3/16" ID X 5/16" OD 1/4" FNPT			
+/- 3%			
1000			
125			
10:1			
10:1			
115 VAC/50-60 HZ/1 ph 230 VAC/50-60 HZ/1 ph			
0.6 0.3			
130			
50			

**Notes:** Viscosity > 1000 < 3000 CPS select connections A or 2 with 316 SS ball.  
 Viscosity > 3000 CPS requires spring loaded ball checks.  
 Foot valve and bleed valve not available with High Viscosity (> 3000 CPS) connections.  
 3/16" ID X 5/16" OD tubing available on models ≤ 12 GPD.

### DIMENSIONS:



Series E Dimensions (inches)						
Model No.	A	B	C	D	E	Shipping Weight
LE02	5	9.6	9.6	6.5	8.2	10
LE03	5	9.9	9.5	6.5	8.5	10
LE12	5	9.6	9.6	6.5	8.2	10
LE13	5	9.9	9.5	6.5	8.5	10
LE14	5	9.9	9.5	6.5	8.5	10
LE33	5.4	10.6	11.4	7.5	9.2	15
LE34	5.4	10.6	11.4	7.5	9.2	15
LE44	5.4	10.6	11.4	7.5	9.2	15

Series A Plus Dimensions (inches)						
Model No.	A	B	C	D	E	Shipping Weight
LB02	5	9.6	9.5	6.5	8.2	10
LB03	5	9.9	9.5	6.5	8.5	10
LB04	5	9.9	9.5	6.5	8.5	10
LB64	5	9.9	9.5	6.5	8.5	10

Series C Plus Dimensions (inches)						
Model No.	A	B	C	D	E	Shipping Weight
LD02	5	9.6	9.5	6.5	8.2	10
LD03	5	9.9	9.5	6.5	8.5	10
LD04	5	9.9	9.5	6.5	8.5	10
LD64	5	9.9	9.5	6.5	8.5	10

**Note:** Inches x 2.54 = cm