

# PULSAtron®

## SERIES E 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 (on most units) for the manual evacuation of entrapped air or vapors and safe relief of pressure in the discharge line.

### CONTROLS

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. Stroke length adjustment shall have a locking lever. Control functions shall be either manual, external pacing with stop, or automatic with stop. For all operating modes, a green indicator light on the control panel shall illuminate when pump is in operation and strobe once for each pump stroke. In all operating modes, a red indicator light on the control panel shall illuminate when pump operation is halted via the stop function.

#### Manual (Standard)

Pump control shall be selectable between on and off by means of a 2-position switch.

#### External Pacing w/Stop (Optional)

Pump control shall be selectable between manual and external by means of a 3 position center off switch. In external mode, the pump shall accept dry contact closures (ex: contacting flow meter). As contact closes, the pump shall stroke once, minimal contact closure time is 10 msec. Contact must open and close for each pump stroke. Maximum closures - 125 per minute.

A dry contact closure to the stop function shall cause pump to halt operation and illuminate a red indicator light on pump control panel in either manual or external pacing mode. Pump shall resume normal operation when contact opens.

#### Automatic w/ Stop (Optional)

Pump control shall be selectable between manual and automatic by means of a 3 position center off switch. In automatic mode, the pump shall accept a direct 4-20 mA DC signal (without a signal interface or conversion device). Internal resistance shall be 124 ohms.

A dry contact closure to the stop function shall cause pump to halt operation in either manual or automatic mode and illuminate a red indicator light on the pump control panel. Pump shall resume normal operation when contact opens.

### 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 fuse mounted on the pump control panel accessible from the outside of 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 control panel shall be enclosed by a hinged dust cover constructed of polycarbonate plastic. The electronic circuitry shall be mounted at the rear of the pump for maximum protection against chemical intrusion.

### AGENCY LISTINGS



### MATERIALS OF CONSTRUCTION

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

**Diaphragm** - Teflon faced, hypalon backed

#### **Check Valves**

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

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

- Housing - GFPPPL, PVC, PVDF, 316SS

**Bleed Valve** - GFPPPL, PVC, PVDF

**Tubing** - Suction 4 ft. PVC

- Discharge 8 ft. PE

Important: Material Code - GFPPPL = 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:

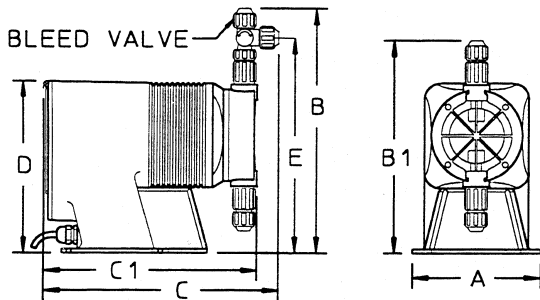
- NSF listing is not available on models LPK2, K3, K5 and LPH8; models with PVDF components or select models (refer to price schedule for details).
- Pump heads in 316SS and PVDF are not available with Model LPH8.
- Pump heads in SAN are not available on pump models rated above 100 PSI.
- Bleed valve not available on pumps configured for high viscosity, NPT connections or Model LPH8.
- Tubing may be supplied in PVDF, Polypropylene, or black U.V. inhibited PE.

## SERIES E PLUS SPECIFICATIONS

MODEL	K2	B2	A2	D3	B3	A3	K3	F4	D4	B4	H4	G4	E4	K5	H5	G5	H6	K7	H7	H8	
Capacity	GPD	3	5	6	11	12	12	14	20	21	24	40	42	44	60	75	94	120	190	240	500
nominal (max.)	GPH	0.13	0.2	0.25	0.45	0.5	0.5	0.58	0.83	0.87	1	1.66	1.75	1.83	2.5	3.17	3.91	5	8	10	20
	LPH	0.47	0.79	0.95	1.73	1.89	1.89	2.2	3.15	3.31	3.78	6.31	6.62	6.94	9.5	11.83	14.82	18.93	29.96	37.85	78.85
Pressure (max.)	PSIG	300	250	150	250	150	100	100	250	150	100	250	150	100	150	150	100	100	50	35	20
	BAR	21	17	10	17	10	7	7	17	10	7	17	10	7	10	10	7	7	3.3	2.4	1.3
Connections: Tubing		1/4" ID X 3/8" OD 3/8" ID X 1/2" OD 3/16" ID X 5/16" OD 1/4" FNPT												3/8" ID X 1/2" OD 1/2" ID x 3/4" OD (LPH8 ONLY)							
Piping														1/4" FNPT 1/2" FNPT							
Reproducibility at max. capacity		+/- 2%																			
Viscosity Max CPS		For viscosity up to 3000 CPS, select connection size 3, 4, B or C with 316SS ball material. Flow rate will determine connection/ball size. 3000 - 10,000 CPS require spring loaded ball checks. See Selection Guide for proper connection.																			
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		1.0																			
@ 230 VAC: Amps		0.5																			
Peak Input Power Watts		300																			
Average Input Power @ max SPM: Watts		130																			

NOTE: Foot valve and bleed valve not available with High Viscosity (. 3000 CPS) connections.

### DIMENSIONS:



### OPTIONAL ACCESSORIES AVAILABLE:

- MIXER
- TANKS
- FLOW METERS
- LIQUID LEVEL CONTROLLER
- TIMERS
- TEST KITS
- KOPkits
- CORPORATION STOPS
- WALL MOUNT KITS
- FIVE FUNCTION VALVE
- HAND HELD TESTERS

Series E Plus Dimensions (inches)								
Model No.	A	B	B1	C	C1	D	E	Shipping Weight
LPA2	5.4	12.7	-	11.3	-	7.5	9.5	13
LPA3	5.4	13	-	11.2	-	7.5	9.7	13
LPB2	5.4	12.7	-	11.3	-	7.5	9.5	13
LPB3	5.4	13	-	11.2	-	7.5	9.7	13
LPB4	5.4	13	-	11.2	-	7.5	9.7	13
LPD3	5.4	13	-	11.7	-	7.5	9.7	15
LPD4	5.4	13	-	11.7	-	7.5	9.7	15
LPE4	5.4	13	-	11.7	-	7.5	9.7	15
LPF4	5.4	13	-	12.2	-	7.5	9.7	18
LPG4	5.4	13	-	12.2	-	7.5	9.7	18
LPG5	5.4	13.4	-	12.2	-	7.5	10.1	18
LPH4	6.2	13.4	-	11.7	-	8.2	10.1	21
LPH5	6.2	13.7	-	11.7	-	8.2	10.5	21
LPH6	6.2	13.7	-	11.7	-	8.2	10.5	21
LPH7	6.1	13.7	-	11.7	-	8.2	10.8	21
LPH8*	6.1	-	10.9	-	10.6	8.2	-	25
LPK2	5.4	12.7	-	11.3	-	7.5	9.5	13
LPK3	5.4	13	-	11.2	-	7.5	9.7	13
LPK5	5.4	13.4	-	12.2	-	7.5	10.1	18
LPK7	6.1	14.14	-	11.7	-	8.2	10.8	21

NOTE: Inches X 2.54 = cm

\* the LPH8 is designed without a bleed valve available.