



 **PULSATRON®**
SOLENOID METERING PUMPS

SIMPLE, RELIABLE AND ROBUST.



QUALITY PRODUCTS, TRUSTED SOLUTIONS **PULSATRON**

Pulsafeeder simplifies diaphragm metering pump technology.

Technology is the key to delivering responsible products to the markets that we serve. Leading the way in the development of metering technologies, **Pulsafeeder continues to set the standard for accuracy, reliability and safety.**

Helping customers find a new approach to an old problem is what we do best.

For over 25 years, the Pulsatron product line has evolved into philosophy of design that continues to **set the standards for the entire industry.** Our engineers have developed a guided check valve system with a proven **'seat and ball' design that ensures reliable and accurate metering year after year.**

Our fin cooled Solenoid enclosure dissipates heat ensuring that the pressure handling capability of the pump can be maintained. The thermally protected Solenoid protects the pump from seizing up in extreme heat conditions with an automatic reset feature allowing the pump to resume operation upon cool-down. **All Pulsatrons are tested and rated under hot conditions guaranteeing that the flow and pressure ratings meet the specifications.**



DIAPHRAGM METERING PUMP TECHNOLOGY.

The key element which differentiates these pumps from other types is the TFE lined elastomer diaphragm. This diaphragm is sealed against the reagent head forming a seal-less, leak free pumping chamber. The solenoid driver is connected to the diaphragm to create the pumping motion. As the diaphragm moves away from the face of the reagent head, it creates a vacuum which closes the discharge check valve and opens the suction check valve, drawing the pumped fluid into the pumping chamber. As the solenoid forces the diaphragm toward the face of the reagent head, the suction check valve closes and the discharge check valve opens allowing the liquid to flow out the discharge valve.

Pulsafeeder sets the standard for accuracy, reliability and safety.



ADVANCED FEATURES AND FUNCTIONS TO BETTER SERVE YOUR CUSTOMERS.

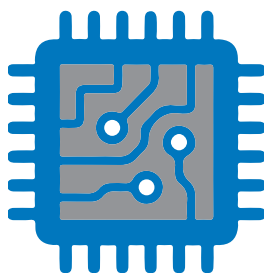
Built to withstand harsh environments, Pulsatron metering pumps are reliable, dosing chemical accurately and safely. Pulsatron pumps offer versatile chemical control allowing them to be used in a large variety of applications. Precisely dose chemical, protecting costly equipment while optimizing chemical feed. This pump is ideal for all cooling tower applications including comfort cooling, industrial cooling, rinse, industrial process and wastewater. For applications where hazardous location ratings matter the Pulsatron X Explosion Proof metering pump provides safe feed of chemical into your process.

Fluid Handlers can select from multiple control configurations — with features and benefits that customers ask for.



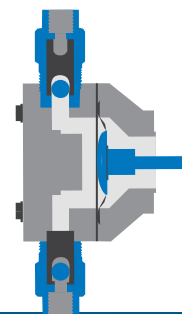
PREMIUM CONSTRUCTION

- Few moving parts
- Optional wet-end materials
- High viscosity handling
- Long-life diaphragm
- Leak-free design



HIGHLY RELIABLE ELECTRONICS

- Advanced timing circuit
- Rated hot for continuous duty
- Thermal overload



GUIDED BALL CHECK VALVE SYSTEM

- Dual ball check with TFE seats
- Reduce back flow
- Outstanding priming characteristics



AUTOMATIC DEGASSING TECHNOLOGY

- Allow air to be vented from the pump head while minimizing the return fluid volume
- Self-priming which eliminates the need for a bleed valve
- Prevents pump from losing prime due to gas build up, especially in applications where the pump is run intermittently with long off times between runs



PROPORTIONAL PROCESS CONTROL

The Pulsatron series metering pumps offer a wide variety of process control inputs

- 4-20mA inputs for metering control with water meters and PLC's
- Dry contact pulse inputs for use with PLC's and dry contact water meters
- External remote stop input for use with a level wand for low chemical level control
- Optional 4-20mA output



AUTOMATIC CONTROL

- External/remote pacing, with stop available on E Plus, E+ RC, HV, MP, X Series
- External pace with auto/manual selection available on A Plus and C Series
- Flow verification available on MP pumps 100 psi or less



INTEGRATED TANK SYSTEM

- 15 gallon tank
- Bulk head assembly
- Flow indicator
- Float assembly
- Pump mounting plate



BLEED VALVE ASSEMBLY

- Safe and easy priming
- Durable and leak-free



FIVE FUNCTION AND FIVE FUNCTION DEGAS VALVE

- Degas - Bypass gases and fluid with five function degas valve
- Back pressure
- Anti-siphon
- Air bleed
- Discharge drain
- Pressure relief with five function valve

SYSTEMS

- Panel mounted or pre-configured system
- Easy to install and operate
- Mounting flexibility
- Quick delivery
- Designed for harsh environments

Features and functions that create a simple to use, reliable, robust diaphragm metering pumps that matter to Fluid Handlers, assisting them in distributing chemical into their system effectively and safely.



PULSATRON

RELIABLE AND VERSATILE.



X SERIES - EXPLOSION PROOF

- Hazardous location rating, for facilities that deal with hazardous material in the environment such as flammable gases
- Rugged, corrosion resistant aluminum housing
- Automatic control, fully scalable 4-20mA input, external pacing input with stop
- Integrated inputs eliminating an extra device and external enclosure
- Manual control allows for a combined 100:1 turn-down by on-line adjustable stroke length and stroke rate
- Durable leak free bleed valve assembly for safe and easy priming



MP SERIES

- Automatic control, fully scalable 4-20mADC, 20-4mADC input or external pacing
- Manual control allows for a combined 1000:1 turn-down
- Graphical LCD with back light display
- Relay and stop outputs
- Simple prompts in plain language and programmable in four languages
- An optional 4-20mA output provides a remote indication of pump speed to remotely confirm the pump's speed is adjusting to your process parameters, and estimate chemical usage over time
- Flow verification option is available on select sizes



E PLUS SERIES

- 100:1 turn down ratio
- Optional 4-20mA with stop function
- Optional external pacing with stop function
- Auto-Off-Manual selection switch with indicator lights
- Built in circuit protection with easy access panel mount fuse
- Clear hinged cover over controls for water resistance



E + RC SERIES - RATIO CONTROL

- Selectable ratio control up to 1.0 Oz/Gallon 10:1 turn down ratio
- Automatic speed control based on water meter input signal
- Prime mode allows the pump to operate at 100% speed
- Built in circuit protection with easy access panel mount fuse
- Clear hinged cover over controls for water resistance



HV SERIES - HIGH VISCOSITY

- Ideal for high viscosity applications, viscosities up to 20,000 CPS
- Automatic control, available with 4-20mADC direct or external pacing, with stop function
- Auto-Off-Manual switch
- Manual control by on-line adjustable stroke length and stroke rate
- Highly reliable timing circuit



A PLUS, C PLUS, E SERIES

- 100:1 turn down ratio; 2000:1 on some models
- Water resistant for outdoor installation
- Manual control by on-line adjustable stroke length and stroke rate
- Optional external pacing with Auto/Manual switch on A Plus
- Internally dampened to reduce noise
- Optional: External pace, external stop or both



C SERIES

- 10:1 turn down ratio
- Optional automatic control by external pacing with prime switch
- Manual control by on-line adjustable stroke length
- Liquid low level option available to prevent loss of prime
- Internally dampened to reduce noise



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Pulsatron Series A Plus

The Pulsatron Series A Plus offers manual function controls over stroke length and stroke rate as standard with the option to select external pace for automatic control.

Ten distinct models are available, having pressure capabilities to 250 PSIG (17 BAR) @ 12 GPD (1.9 lph), and flow capacities to 58 GPD (9.1 lph) @ 100 PSIG (7.0 BAR), with a standard turndown ratio of 100:1, and optional ratio of 2000:1. Metering performance is reproducible to within $\pm 3\%$ of maximum capacity.

FEATURES

- Manual control by on-line adjustable stroke rate and stroke length.
- Highly reliable timing circuit.
- Circuit protection against voltage and current upsets.
- Solenoid protection by thermal overload with auto-reset.
- Water resistant, for outdoor and indoor applications.
- Internally dampened to reduce noise.
- Guided ball check valve systems, to reduce back flow and enhance outstanding priming characteristics.
- Few moving parts and wall mountable.
- Safe & easy priming with durable leak-free bleed valve assembly.
- Optional control: External pace with auto/manual selection.



BENEFITS

- Reliable metering performance.
- Rated "hot" for continuous duty.
- High viscosity capability.
- Leak-free, sealless, liquid end.

CONTROLS

Manual Stroke Rate

- Turn-Down Ratio 10:1

Manual Stroke Length

- Turn-Down Ratio 10:1

External Pacing Option

External Stop Option

External Pace With Stop Option (125 PM only)



Tested and Certified by WQA
against NSF/ANSI/CAN 61 & 372.



PVDF & PVC Degass Head Pumps.
See www.wqa.org for
certification parameters.



SPECIFICATIONS

MODEL		LBC2	LB02	LBC3	LB03	LB04	LB64	LBC4	LBS2	LBS3	LBS4	
Capacity nominal (max)		GPH	0.25	0.25	0.42	0.50	1.00	1.25	2.00	0.50	1.38	2.42
		GPD	6	6	10	12	24	30	48	12	33	58
		LPH	0.9	0.9	1.6	1.9	3.8	4.7	7.6	1.9	5.2	9.14
Pressure ³ (max.)	GFPP, PVDF, 316SS or PVC (W code) w/TFE Seats)	PSIG (Bar)	250 (17)	150 (10)	250 (17)	150 (10)	100 (7)	100 (7)	50 (3.3)	250 (17)	150 (10)	100 (7)
	PVC (V code) Viton or CSPE Seats / Degas Liquid End											
			150 (10)									
Connections:		Tubing	1/4" ID X 3/8" OD						3/8" ID X 1/2" OD	1/4" ID X 3/8" OD		
		Piping	1/4" FNPT									
Strokes/Minute		SPM	125							250		

Note 3: Pumps with rated pressure above 150 PSI will be de-rated to 150 PSI Max. when selecting certain valve options, see Price Book for details.

ENGINEERING DATA

Pump Head Materials Available	GFPP, PVC, PVDF, 316 SS
Diaphragm	PTFE-faced CSPE-backed
Check Valves Materials Available	
Seats/O-Rings	PTFE, CSPE, Viton
Balls	Ceramic, PTFE, 316 SS, Alloy C
Fittings Materials Available	GFPP, PVC, PVDF
Bleed Valve	Same as fitting and check valve selected, except 316SS
Injection Valve & Foot Valve Assy	Same as fitting and check valve selected
Tubing	Clear PVC, White PE

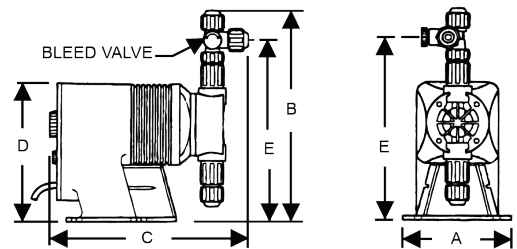
Important: Material Code - GFPP=Glass-filled Polypropylene, PVC=Polyvinyl Chloride, PE=Polyethylene, PVDF=Polyvinylidene Fluoride, CSPE=Generic formulation of Hypalon, a registered trademark of E.I. DuPont Company. Viton is a registered trademark of E.I. DuPont Company. PVC wetted end recommended for sodium hypochlorite.

Reproducibility	±3% at maximum capacity
Viscosity Max CPS	1000 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. Greater than 3000 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	0.6 Amps
@230 VAC: Amps	0.3 Amps
Peak Input Power	130 Watts
Average Input Power @ Max SPM	50 Watts
Approvals	Conforms to ANSI/NSF STD. 50

DIMENSIONS

Series A PLUS Dimensions (inches)						
Model No.	A	B	C	D	E	Shipping Weight
LB02 / S2	5.0	9.6	9.5	6.5	8.2	10 lbs.
LBC2	5.0	9.9	9.5	6.5	8.5	10 lbs.
LBC3	5.0	9.9	9.5	6.5	8.5	10 lbs.
LB03 / S3	5.0	9.9	9.5	6.5	8.5	10 lbs.
LB04 / S4	5.0	9.9	9.5	6.5	8.5	10 lbs.
LB64	5.0	9.9	9.5	6.5	8.5	10 lbs.
LBC4	5.0	9.9	9.5	6.5	8.5	10 lbs.

NOTE: Inches X 2.54 = cm



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PULSAtron Series E Plus

The PULSAtron Series E Plus offers manual control over stroke length and stroke rate as standard with the option to choose between 4-20mA and external pace inputs for automatic control.

Twenty distinct models are available, having pressure capabilities to 300 PSIG (21 BAR) @ 3 GPD (0.5 lph), and flow capacities to 600 GPD (94.6 lph) @ 30 PSIG (2 BAR), with a turndown ratio of 100:1. Metering performance is reproducible to within $\pm 2\%$ of maximum capacity.

Please refer to the reverse side for Series E PLUS specifications.

FEATURES

- Automatic Control, available with 4-20mADC direct or external pacing, with stop function.
- Manual Control by on-line adjustable stroke rate and stroke length.
- Auto-Off Manual switch.
- Highly Reliable timing circuit.
- Circuit Protection against voltage and current upsets.
- Panel Mounted Fuse.
- Solenoid Protection by thermal overload with auto-reset.
- Water Resistant, for outdoor and indoor applications.
- Indicator Lights, panel mounted.
- Guided Ball Check Valve Systems, to reduce back flow and enhance outstanding priming characteristics.
- Safe & Easy Priming with durable leak-free bleed valve assembly (standard)



BENEFITS

- Reliable metering performance.
- Rated "hot" for continuous duty.
- High viscosity capability.
- Leak-free, sealless, liquid end.

CONTROLS

Manual Stroke Rate

- Turn-Down Ratio 10:1

Manual Stroke Length

- Turn-Down Ratio 10:1

4-20mADC Direct or External Pacing with Stop

- Automatic Control



Tested and Certified by WQA
against NSF/ANSI/CAN 61 & 372.



PVDF & PVC Degass Head Pumps.
See www.wqa.org for
certification parameters.



SPECIFICATIONS

MODEL		LPK2	LPB2	LPA2	LPD3	LPB3	LPA3	LPK3	LPF4	LPD4	LPB4	LPH4	LPG4	LPE4	LPK5	LPH5	LPG5	LPH6	LPK7	LPH7	LPJ7	LPH8
Capacity nominal (max.)	GPH	0.13	0.21	0.25	0.5	0.50	0.50	0.60	0.85	0.90	1.00	1.70	1.75	1.85	2.50	3.15	4.00	5.00	8.00	10.00	10.00	25.00
	GPD	3	5	6	12	12	12	14	20	22	24	41	42	44	60	76	96	120	192	240	240	600
	LPH	0.5	0.8	0.9	1.9	1.9	1.9	2.3	3.2	3.4	3.8	6.4	6.6	7	9.5	11.9	15.1	18.9	30.3	37.9	37.9	94.6
Pressure (max.)	PSIG	300	250	150	250	150	100	100	250	150	100	250	150	100	150	150	100	100	50	35	80	30
	BAR	21	17	10	17	10	7	7	17	10	7	17	10	7	10	10	7	7	3.3	2.4	5.5	2
Connections	Tubing	1/4" ID X 3/8" OD												3/8" ID X 1/2" OD								
	Piping	3/8" ID X 1/2" OD												1/2" ID X 3/4" OD (LPH8 ONLY)								
		1/4" FNPT												1/4" FNPT								
														1/2" FNPT								

ENGINEERING DATA

Pump Head Materials Available	GFPPL, PVC, PVDF, 316 SS
Diaphragm	PTFE-faced CSPE-backed
Check Valves Materials Available	
Seats/O-Rings	PTFE, CSPE, Viton
Balls	Ceramic, PTFE, 316 SS, Alloy C
Fitting Materials Available	GFPPL, PVC, PVDF
Bleed Valve	Same as fitting and check calce selected
Injection Valve & Foot Valve Assy	Same as fitting and check calce selected
Tubing	Clear PVC, White PE

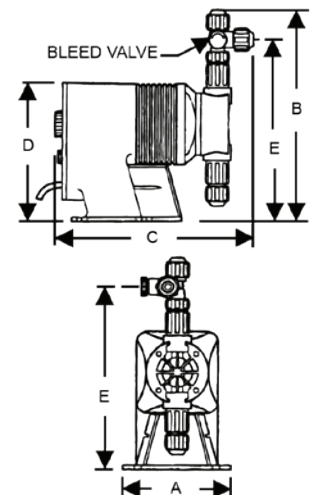
Important: Material Code - GFPPL=Glass-filled Polypropylene, PVC=Polyvinyl Chloride, PE=Polyethylene, PVDF=Polyvinylidene Fluoride, CSPE=Generic formulation of Hypalon, a registered trademark of E.I. DuPont Company. Viton is a registered trademark of E.I. DuPont Company. PVC wetted end recommended for sodium hypochlorite

Reproducibility	±2% a maximum capacity
Viscosity Max CPS	1000 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. Greater than 3000 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 Amps
@230 VAC: Amps	0.5 Amps
Peak Input Power	300 Watts
Average Input Power @ Max SPM	130 Watts
Approvals	Conforms to ANSI/NSF STD. 50

DIMENSIONS

Series E Plus Dimensions (inches)																	
Model No.	A	B	B1	C	C1	D	E	Shpg Wt	Model No.	A	B	B1	C	C1	D	E	Shpg Wt
LPA2	5.4	10.3	-	10.8	-	7.5	8.9	13 lbs.	LPG5	5.4	10.9	-	11.7	-	7.5	9.5	18 lbs.
LPA3	5.4	10.6	-	10.7	-	7.5	9.2	13 lbs.	LPH4	6.2	10.9	-	11.2	-	8.2	9.5	21 lbs.
LPB2	5.4	10.3	-	10.8	-	7.5	8.9	13 lbs.	LPH5	6.2	11.3	-	11.2	-	8.2	9.9	21 lbs.
LPB3	5.4	10.6	-	10.7	-	7.5	9.2	13 lbs.	LPH6	6.2	11.3	-	11.9	-	8.2	9.9	21 lbs.
LPB4	5.4	10.6	-	10.7	-	7.5	9.2	13 lbs.	LPH7	6.1	11.7	-	11.9	-	8.2	10.3	21 lbs.
LPD3	5.4	10.6	-	11.2	-	7.5	9.2	15 lbs.	LPH8*	6.1	-	10.9	-	11.3	8.2	-	26 lbs.
LPD4	5.4	10.6	-	11.2	-	7.5	9.2	15 lbs.	LPK2	5.4	10.3	-	10.8	-	7.5	8.9	13 lbs.
LPE4	5.4	10.6	-	11.2	-	7.5	9.2	15 lbs.	LPK3	5.4	10.6	-	10.7	-	7.5	9.2	13 lbs.
LPF4	5.4	10.6	-	11.7	-	7.5	9.2	18 lbs.	LPK5	5.4	10.9	-	11.7	-	7.5	9.5	18 lbs.
LPG4	5.4	10.6	-	11.7	-	7.5	9.2	18 lbs.	LPK7	6.1	11.7	-	11.2	-	8.2	10.3	21 lbs.
									LPJ7	6.1	10	-	10.7	-	-	-	21 lbs.

NOTE: Inches x 2.54 = cm /* the LPH8 is designed without a bleed valve available.



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