PULSAtron® PLUS

PULSAFEEDER®
A Unit of IDEX Corporation

# Series CL

## Conductivity Control with Limit Timer

The Series CL was designed to control conductivity and feed inhibitor in an open-air cooling tower. The Series CL combines everything you need to control conductivity and feed inhibitor into one unique, compact package to create a simple and cost effective metering and control system.

### Principle of Operation

The Series CL includes a conductivity sensor, bleed relay and a user programmable limit timer. When conductivity reaches the user specified level, the system activates the bleed relay and begins pumping inhibitor. The 'feed & bleed ' cycle will continue until the conductivity returns to the desired level. The programmable limit timer allows the user to specify a maximum pumping time for the feed cycle. If the limit time expires before the conductivity level returns to the set range, the pump stops feeding while the bleed continues. Once the conductivity level is reached and the system stops bleeding, the feed limit timer is automatically reset for the next bleed cycle.

### Operating Benefits

- **Complete Control System** in one unique package. There is no need for a separate controller. All control functions are integrated into the pump eliminating the expense of purchasing and installing another piece of equipment.
- **Easy to program User Interface.** There are no complicated menu structures in order to set up the PULSAtron Plus for your specific parameters. Simply press the universally recognized symbol key identifying the function you wish to adjust and change the value with the up or down arrow key.
- **4-electrode conductivity cell.** New electrode technology enhances accuracy and stability of the conductivity measurement providing a greater level of control within your application.
- **Programmable Limit Timer.** User can limit the run time on the pump for each 'feed & bleed' cycle. This eliminates the potential of chemical overfeed in the event of a clogged solenoid valve. The run time can be set to run up to 24 hours in 1 minute increments.
- **Reliable metering performance**. Guided check valves with the proven seat and ball designs make PULSAtron the most reliable metering pumps in the world. PULSAtron pumps are known for excellent suction lift characteristics resulting in highly dependable chemical additions.
- **Rated 'hot' for Continuous duty**. PULSAtron Plus pumps continue to meet their specifications for pressure and capacity during extended use. The solenoid is separately encapsulated in a fin-cooled, thermal-conductive enclosure that effectively dissipates heat away from the electronics.
- **Leak-free, wet end without seals.** Our diaphragms are of superior construction – teflon-faced, bonded to a composite of Hypalon that is reinforced with fabric layers and driven with a metal insert for optimum flexibility and durability.


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# PULSAtron PLUS Series CL Specifications

Four distinct models are available, having pressure capabilities to 150 PSIG / 10 BAR at 6 GPD and flow capacities to 30 GPD / 5.04 LPH at 100 PSIG/7 BAR with a 100:1 turndown ratio. Metering performance is reproducible to within ±2% of maximum capacity. For full model selection information refer to Price Schedule EMP-PS LP.

- 120VAC or 250VAC @ 50/60 HZ, 5A max
- 4-electrode conductivity input
- 0-6000 µS/cm ± 1%, temperature compensated
- Relay rated to 5A at 240VAC
- Isolated dry contact flow switch input
- 4 Digit LED, 9 key membrane keypad
- Single-button function keys
- Set, Differential, Calibration, and Pulse Timer functions
- Stroke rate adjusts 0-100% in 1% increments, turndown ratio 100:1

### Pressure and Flow Rate Capacity

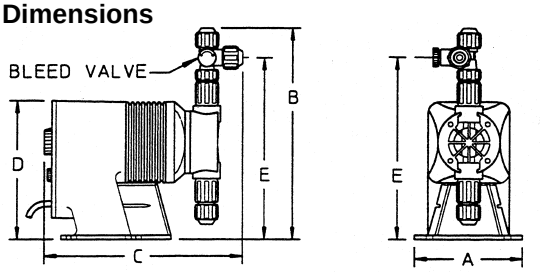
| Capacity, nominal | | | | | |
|---|---|---|---|---|---|
| | GPD | 6 | 12 | 22 | 30 |
| | GPH | 0.25 | 0.50 | 0.91 | 1.25 |
| | LPH | 0.95 | 1.89 | 3.47 | 5.04 |
| **Pressure, max PSIG / Bar** | | | | | |
| 150/10 | | LL02 | LL03 | --- | --- |
| 100/7 | | | | LL04 | LL64 |

### Liquid End Materials

| Series | Pump Head | Diaphragm | Check Valves | | Fittings | Bleed Valve | Injection Valve Assembly Foot Valve Assembly | Tubing |
|---|---|---|---|---|---|---|---|---|
| | | | Seats / O-Rings | Balls | | | | |
| **Series CL** | GFPPL PVC SAN PVDF | Teflon-faced Hypalon-backed | Teflon, Hypalon, Viton | Ceramic, Teflon | GFPPL PVC PVDF | Same as fitting and check valve selected, except 316SS | Same as fitting and check valve selected | Clear PVC White 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. PVC wetted end recommended for sodium hypochlorite.

### Dimensions




| Series CL Dimensions (inches) | | | | | | |
|---|---|---|---|---|---|---|
| Model No. | A | B | C | D | E | Shipping Weight (lbs.) |
| LL02 | 5.0 | 9.6 | 9.5 | 6.5 | 8.2 | 13 |
| LL03 | 5.0 | 9.9 | 9.5 | 6.5 | 8.5 | 13 |
| LL04 | 5.0 | 9.9 | 9.5 | 6.5 | 8.5 | 13 |
| LL64 | 5.0 | 9.9 | 9.5 | 6.5 | 8.5 | 13 |

**Note:** Inches x 2.54 = cm

### KOPkit®


Available for every model, the KOPkit provides an economically priced package of parts required for routine maintenance. The kit typically contains new valve cartridges with o-rings, head, diaphragm, secondary o-ring seal, head screws and washers.

**For further KOPkit information, refer to Technical Sheet No. EMP-002.**


An ISO Certified Company

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