

Blue-White[®]

Industries, Ltd.

CHEM-FEED[®] Diaphragm Metering Pumps

Engineering and Technical Data

C-1500N

Fixed Speed

2 OUTPUT CONTROL OPTIONS:

Standard Models feature a quick adjusting, high accuracy mechanical *stroke length control*. The pump's efficient design allows for a minimum stroke length of 5%. Minimum recommended output is 5% of maximum.

Deluxe Models feature *stroke length* and electronic *time Interval control*. The pump's on time is adjustable from 5-100% of the repeating 5 second time interval. (0.25 - 5.0 sec.) The high frequency of the repeating 5 second time interval, and the extremely accurate mechanical stroke adjustment, result in a higher frequency of small injections per minute. Minimum recommended output is .5% of maximum.



Standard



Deluxe



Features:

- All ball bearing, permanently lubricated gear motor for smooth, quiet, powerful operation.
- Double-ball inlet and outlet cartridge type ceramic check valves. Chemical resistant PVDF valve body and fitting, ceramic balls, Viton static seals and TFE/P ball seat o-rings. No metal springs are used.
- Stroke adjustment from 5-100% permits accurate small injections at a high rate per minute.
- Outputs to 36 LPH (228.1 GPD).
- Output pressures to 125 PSI.
- Teflon coated EP diaphragm.
- Includes visual flow indicator on the suction line tubing.
- Outdoor rated enclosure.
- Durable housing of chemical resistant Valox (PBT) thermoplastic.
- PVDF suction (foot) valve with Viton and TFE/P o-rings, ceramic check ball and removable polypropylene filter screen.
- Includes 3/8" OD suction and discharge tubing, Injection fitting with spring-loaded check valve and all mounting hardware.

Specifications:

Max. working pressure:125 psig (8.6 bar)

Max. fluid temperature:130° F (54° C)

Max. ambient temperature: ..14° to 110° F/ -10° to 43° C

Maximum viscosity:1,000 Centipoise

Maximum suction lift:10 ft. Water 0 psig

Output adjustment range:

Standard model: 5-100% stroke length

Deluxe model: ...5-100% stroke length &
5-100% of the repeating 5 second interval timer.
(12 Injections per minute)

Duty cycle:Continuous

Enclosure:NEMA type 3R, (IP23)

Voltage (amp draw):115VAC/60Hz, 1ph (.74 amp max)

230VAC/60Hz, 1ph (.36 amp max)

220VAC/50Hz, 1ph (.31 amp max)

24VAC/60Hz, 1ph (3.40 amp max)

Power Cord Plug Type:115V60Hz = NEMA 5/15 (USA)

230V60Hz = None (junction box)

220V50Hz = CEE 7/VII (EUROPE)

24V50Hz = None (junction box)

Approximate shipping wt: ...8 lb. (3.6 kg)

Materials of Construction:

Wetted components:

Pump Head:Polypropylene (options: Teflon, Acrylic)

Pump Head Inlet/outlet Valves:

Cartridge valve body:PVDF

Tube adapters:PVDF

Check Balls:Ceramic

Ball Seat O-ring:TFE/P (optional EP)

Static Seal O-ring:Viton[®] (optional EP)

Suction Tubing:Clear PVC

Flow indicator:Clear PVC body, glass ball
(Carwash models use 316 SS ball)

Discharge Tubing:Natural Polyethylene (LLDPE)

Suction Footvalve/Strainer:

Body & Tubing adapter:PVDF (optional Teflon)

Strainer:Polypropylene

Check Ball:Ceramic (optional Teflon poppet)

Ball Seat O-ring:TFE/P (optional EP)

Static Seal O-ring:Viton[®] (optional EP)

Injection/Check valve:

Body & insert:Polypropylene (optional PVDF, Teflon)

Check Ball:Ceramic (optional Teflon poppet)

Spring:Hastelloy C-276

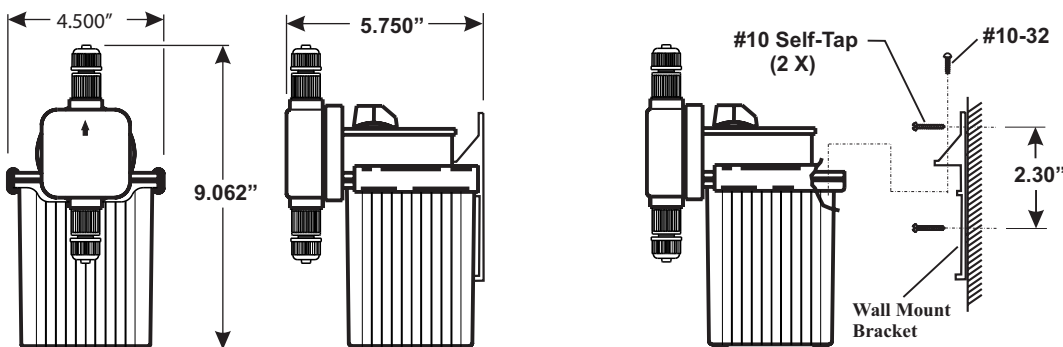
Ball Seat O-ring:TFE/P (optional EP)

Static Seal O-ring:Viton[®] (optional EP)

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Dimensions:



Model Number Matrix:

| MODEL C15N | | | | | | | | | | | |
|--|--|---|---------------------|--|--|--|--|--|--|--|--|
| Maximum Motor RPM | | 0 = 14 RPM | 3 = 60 RPM | | | | | | | | |
| | | 1 = 30 RPM | 4 = 125 RPM | | | | | | | | |
| | | 2 = 45 RPM | | | | | | | | | |
| Power Supply (motor protection) | | 0 = 115V60Hz (IP) | 4 = 115V60Hz (TP) | | | | | | | | |
| | | 1 = 220V50Hz (IP) | 5 = 220V50Hz (TP) | | | | | | | | |
| | | 2 = 230V60Hz (IP) | 6 = 230V60Hz (TP) | | | | | | | | |
| | | 3 = 24V60Hz (IP) | 7 = 24V50Hz (none)* | | | | | | | | |
| | | | 8 = 240V50Hz (TP) | | | | | | | | |
| | | IP = impedance protection, TP = Thermal protection | | | | | | | | | |
| | | * intermittent duty only | | | | | | | | | |
| Cam Stroke Length | | 1 = .125" | 3 = .187" | | | | | | | | |
| | | 2 = .055" | 4 = .100" | | | | | | | | |
| Output Control & Electrical | | X = Standard Equipment I = Analog timer, 5 sec. Cycle - 100% duty K = Analog timer, 60 sec. Cycle - 100% duty A = Junction box replaces power cord C = On/Off switch and junction box P = Power cord and junction box R = 230V Power cord w/NEMA 6/15 plug T = 230V Power cord and on/off switch Z = Proportional feed system - JBox/Cord | | | | | | | | | |
| Footvalve | | 0 = C-340 (PVDF/Polypropylene) 1 = C-345 (PVDF/Polypropylene - bulkhead mount) 2 = C-340-6T (Teflon) | | | | | | | | | |
| Injection Fitting | | 0 = A-014HD (Polypropylene - ½ lb spring) 1 = C-395HD (Polypropylene - 6 lb spring) A = A-014-6T (Teflon - ½ lb spring) B = C-395-6T (Teflon - 6 lb spring) C = A-014HDK (PVDF - ½ lb spring) D = C-395HDK (PVDF - 6 lb spring) | | | | | | | | | |
| Elastomer Material | | V = Viton E = EP | | | | | | | | | |
| Diaphragm Style | | 0 = Large Teflon/EP 6 = Small Teflon / EP 1 = Large Teflon/Viton 7 = Small Teflon / EP | | | | | | | | | |
| Pump Head Style | | 0 = Large Diaphragm 4 = Large Diaphragm Carwash 2 = Small Diaphragm 6 = Small Diaphragm Carwash 5 = Large Pressure release | | | | | | | | | |
| Pump Head Material | | 0 = Injection molded Polypropylene 4 = Machined Teflon 5 = Machined Acrylic | | | | | | | | | |

Flow rate and pressure capacities:

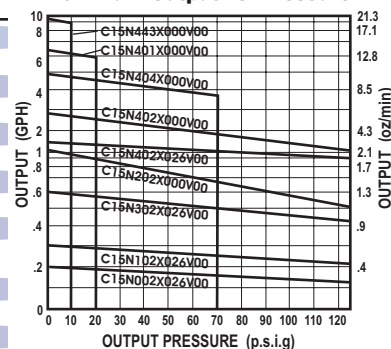
Standard models with Stroke Adjustment (20:1 turndown)

| Max Output at 0 PSI | | | | Strokes | Max | 115V/60Hz | 230V/60Hz | 220V/50Hz* |
|---------------------|-----|------|--------|------------|-----|----------------|----------------|----------------|
| GPD | GPH | LPH | OZ/MIN | Per minute | PSI | Model Number | Model Number | Model Number |
| 3.4 | 0.2 | 0.5 | 0.3 | 14 | 125 | C15N002X026V00 | C15N022X026V00 | C15N012X026V00 |
| 8.3 | 0.3 | 1.3 | 0.7 | 30 | 125 | C15N102X026V00 | C15N122X026V00 | C15N112X026V00 |
| 16.3 | 0.6 | 2.5 | 1.4 | 60 | 125 | C15N302X026V00 | C15N322X026V00 | C15N312X026V00 |
| 26.6 | 1.1 | 4.2 | 2.4 | 45 | 125 | C15N202X000V00 | C15N222X000V00 | C15N212X000V00 |
| 34.2 | 1.4 | 5.4 | 3.0 | 125 | 125 | C15N402X026V00 | C15N422X026V00 | C15N412X026V00 |
| 68.4 | 2.8 | 10.8 | 5.9 | 125 | 125 | C15N402X000V00 | C15N422X000V00 | C15N412X000V00 |
| 119.7 | 4.9 | 18.9 | 10.6 | 125 | 70 | C15N404X000V00 | C15N424X000V00 | C15N414X000V00 |
| 155.9 | 6.4 | 24.6 | 13.8 | 125 | 20 | C15N401X000V00 | C15N421X000V00 | C15N411X000V00 |
| 228.1 | 9.5 | 36.0 | 20.2 | 125 | 10 | C15N443X000V00 | C15N463X000V00 | C15N453X000V00 |

Deluxe models with Stroke & Time Interval Adjustment (400:1 turndown)

| | | | | | | | | |
|-------|-----|------|------|-----|-----|----------------|----------------|----------------|
| 34.2 | 1.4 | 5.4 | 3.0 | 125 | 125 | C15N402I026V00 | C15N422I026V00 | C15N412I026V00 |
| 68.4 | 2.8 | 10.8 | 5.9 | 125 | 125 | C15N402I000V00 | C15N422I000V00 | C15N412I000V00 |
| 155.9 | 6.4 | 24.6 | 13.8 | 125 | 20 | C15N401I000V00 | C15N421I000V00 | C15N411I000V00 |

Maximum Output vs. Pressure



* Note: 220V/50Hz models deliver approximately 20% less output.