

# Blue-White<sup>®</sup> Industries, Ltd.

## CHEM-FEED<sup>®</sup> Diaphragm Metering Pumps Engineering and Technical Data

### C-1700N

**Dual Independently  
Adjustable Heads**

**Fixed Speed**



#### Features:

- Simultaneously feed two chemicals, in proportion to each other, with one pump.
- 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.
- Dual, Independent stroke adjustment from 5-100% permits accurate small injections at a high rate per minute.
- Outputs to 48 LPH (304.2 GPD). (Total both heads)
- Output pressures to 125 PSI.
- Teflon coated EP diaphragms.
- Includes visual flow indicators on the suction line tubing.
- Outdoor rated enclosure.
- Durable housing of chemical resistant Valox (PBT) thermoplastic.
- PVDF suction (foot) valves with Viton and TFE/P o-rings, ceramic check balls and polypropylene filter screens.
- Includes 2 sets of 3/8" OD suction and discharge tubing, 2 Injection fittings with spring-loaded check valves 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: ....5-100% stroke length  
 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<sup>®</sup> (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<sup>®</sup> (optional EP)

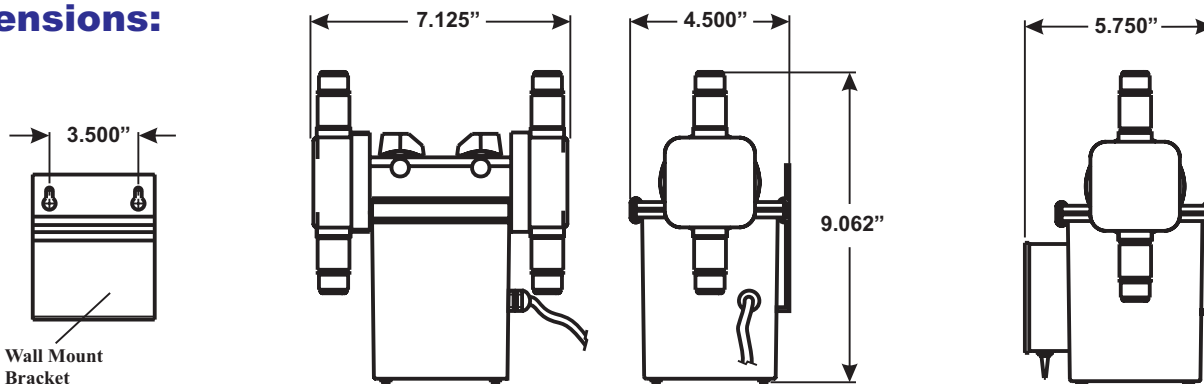
##### Injection/Check valve:

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<sup>®</sup> (optional EP)

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## CHEM-FEED® Diaphragm Metering Pumps

### Dimensions:



### Model Number Matrix:

MODEL C17N												
<b>Maximum Motor RPM</b>		<b>Footvalve</b>										
0 = 14 RPM	3 = 60 RPM	0 = C-340 (PVDF/Polypropylene)										
1 = 30 RPM	4 = 125 RPM	1 = C-345 (PVDF/Polypropylene - bulkhead mount)										
2 = 45 RPM		2 = C-340-6T (Teflon)										
<b>Power Supply (motor protection)</b>		<b>Injection Fitting</b>										
0 = 115V60Hz (IP)	6 = 230V60Hz (TP)	0 = A-014HD (Polypropylene - 1/2 lb spring)										
1 = 220V50Hz (IP)	7 = 24V60Hz (ID)	1 = C-395HD (Polypropylene - 6 lb spring)										
2 = 230V60Hz (IP)	8 = 115V60Hz (TP/ID)	A = A-014-6T (Teflon - 1/2 lb spring)										
3 = 24V60Hz (IP)	9 = 220V50Hz (TP/ID)	B = C-395-6T (Teflon - 6 lb spring)										
4 = 115V60Hz (TP)	A = 240V50Hz (TP)	C = A-014HDK (PVDF - 1/2 lb spring)										
5 = 220V50Hz (TP)		D = C-395HDK (PVDF - 6 lb spring)										
IP = impedance protection, TP = Thermal protection, ID = intermittent duty only		<b>Elastomer Material</b>										
		V = Viton	E = EP									
<b>Cam Stroke Length</b>		<b>Diaphragm Style</b>										
1 = .125"	3 = .187"	0 = Large Teflon/EP	6 = Small Teflon / EP									
2 = .055"	4 = .100"	1 = Large Teflon/Viton	7 = Small Teflon / EP									
<b>Output Control &amp; Electrical</b>		<b>Pump Head Style</b>										
X = Standard Equipment		0 = Large Diaphragm	4 = Large Diaphragm Carwash									
I = Analog timer, 5 sec. Cycle - 100% duty		2 = Small Diaphragm	6 = Small Diaphragm Carwash									
K = Analog timer, 60 sec. Cycle - 100% duty		5 = Large Pressure release										
A = Junction box replaces power cord		<b>Pump Head Material</b>										
C = On/Off switch and junction box		0 = Injection molded Polypropylene										
P = Power cord and junction box		4 = Machined Teflon										
R = 230V Power cord w/NEMA 6/15 plug		5 = Machined Acrylic										
T = 230V Power cord and on/off switch												
Z = Proportional feed system - JBox/Cord												

### Flow rate and pressure capacities:

#### Standard models with Stroke Adjustment (20:1 turndown)

Max Output at 0 PSI				Strokes Per minute	Max PSI	115V/60Hz		230V/60Hz		220V/50Hz*	
GPD	GPH	LPH	OZ/MIN			Model Number	Model Number	Model Number	Model Number		
14.2	0.6	2.3	1.3	14	125	C17N002X000V00	C17N022X000V00	C17N012X000V00			
28.9	1.2	4.5	2.6	14	125	C17N004X000V00	C17N024X000V00	C17N014X000V00			
50.2	2.1	7.9	4.4	45	125	C17N202X000V00	C17N222X000V00	C17N212X000V00			
62.3	2.6	9.8	5.5	60	125	C17N302X000V00	C17N322X000V00	C17N312X000V00			
89.7	3.7	14.1	8.0	45	125	C17N204X000V00	C17N224X000V00	C17N214X000V00			
119.0	5.0	18.8	10.6	60	125	C17N304X000V00	C17N324X000V00	C17N314X000V00			
133.8	5.5	21.1	11.9	125	125	C17N402X000V00	C17N422X000V00	C17N412X000V00			
243.3	10.1	38.4	21.6	125	70	C17N404X000V00	C17N424X000V00	C17N414X000V00			
304.2	12.6	48.0	27.0	125	20	C17N401X000V00	C17N421X000V00	C17N411X000V00			

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

#### Maximum Output vs. Pressure

