

# Blue-White® Industries, Ltd.

CHEM-FEED® Diaphragm Metering Pumps  
Engineering and Technical Data

## C-1100V

**Digital Variable Speed  
Stroke & Speed Control  
4-20mA, 0-10VDC  
& Pulse Inputs**



### Features:

- 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 length & speed adjustment for accurate small injections at a high rate per minute. 400:1 turndown ratio.
- Outputs to 15 GPH (56.8 LPH).
- Output pressures to 150 PSI (10.3 bar).
- 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.
- Accepts 4-20mA, 0-10Vdc, and Pulse inputs for manual or external speed control.
- Operator friendly digital touch pad.
  - Easy to read LCD display
  - Service and Alarm indicator icons.
  - Display motor speed or input signal values.
  - Prime mode for easy priming without changing programming.
- Compatible with Blue-White's output flow verification sensor system.
- Durable housing of chemical resistant Valox (PBT) thermoplastic.

### Specifications:

Max. working pressure: .....150 psig (10.3 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: .....400:1  
Stroke length: .....5-100%  
Motor speed: .....5-100%  
Duty cycle: .....Continuous  
Enclosure: .....NEMA 3R, (IP23)

Voltage (amp draw): .....115VAC/60Hz, 1ph (.350 amp max)  
230VAC/60Hz, 1ph (.173 amp max)  
220VAC/50Hz, 1ph (.175 amp max)  
240VAC/50Hz, 1ph (.193 amp max)  
Power Cord Plug Type: .....115V60Hz = NEMA 5/15 (USA)  
230V60Hz = NEMA 6/15 (USA)  
220V50Hz = CEE 7/VII (EUROPE)  
240V50Hz = CEE 7/VII (EUROPE)  
Approximate shipping wt: ...12 lb. (5.4 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  
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:

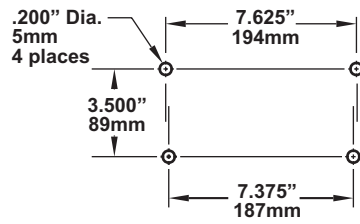
Body & insert: .....Polypropylene (optional PVDF, Teflon)  
Check Ball: .....Ceramic (optional Teflon poppet)  
Spring: .....Hastelloy C-276  
Ball Seat O-ring: .....TFE/P (optional EP)  
Static Seal O-ring: .....Viton® (optional EP)

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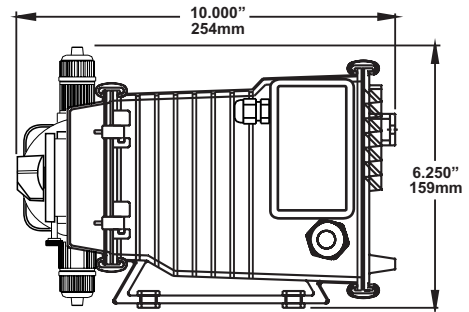
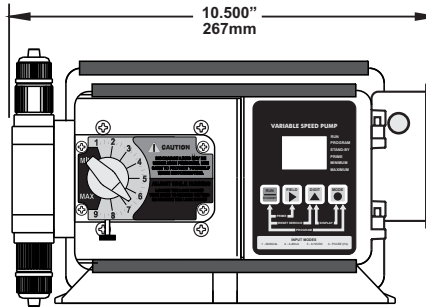
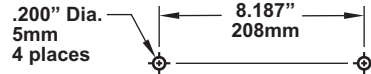
## CHEM-FEED® Diaphragm Metering Pumps

### Dimensions:

#### Base Mounting



#### Rear Panel Mounting



### Model Number Matrix:

MODEL	C	11	V																	
<b>Pump system selection</b>	C = Pump without tank system T = Pump mounted on STAR-3 tank																			
<b>Output Control</b>	V = Digital speed control with external input F = Analog speed control C = Analog timer, 5 sec. Cycle - 100% duty A = Analog timer, 60 sec. Cycle - 100% duty E = Digital batch timer with external input X = No output control - fixed feed rate																			
<b>Maximum Motor RPM</b>	0 = 14 RPM      3 = 60 RPM 1 = 30 RPM     4 = 125 RPM 2 = 45 RPM     5 = 250 RPM																			
<b>Power Supply (motor protection)</b>	4 = 115V60Hz (TP) 5 = 220V50Hz (TP) 6 = 230V60Hz (TP) 7 = 240V50Hz (TP) TP = Thermal protection																			
<b>Cam Stroke Length</b>	1 = .125"      3 = .187" 2 = .055"     4 = .100"																			
<b>Electrical Options</b>	X = Standard Equipment A = Junction box replaces power cord P = Power cord and junction box R = 230V Power cord w/NEMA 6/15 plug Z = Proportional feed system - JBox/Cord																			
<b>Footvalve / Tank Capacity</b>	0 = C-340 1 = C-345 2 = C-340-6T A = 7 Gallons (U.S.) B = 15 Gallons (U.S.) C = 30 Gallons (U.S.)																			
<b>Injection Fitting</b>	0 = A-014HD (Polypropylene - 1/2 lb spring) 1 = C-395HD (Polypropylene - 6 lb spring) A = A-014-6T (Teflon - 1/2 lb spring) B = C-395-6T (Teflon - 6 lb spring) C = A-014HDK (PVDF - 1/2 lb spring) D = C-395HDK (PVDF - 6 lb spring)																			
<b>Elastomer Material</b>	V = Viton      E = EP																			
<b>Diaphragm Style</b>	0 = Large Teflon/EP 1 = Large Teflon/Viton 6 = Small Teflon / EP 7 = Small Teflon / EP																			
<b>Pump Head Style</b>	0 = Large Diaphragm 2 = Small Diaphragm 5 = Large Pressure release 7 = Large Diaphragm w/single ball valve																			
<b>Pump Head Material</b>	0 = Injection molded Polypropylene 4 = Machined Teflon 5 = Machined Acrylic																			

### Flow rate and pressure capacities:

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	
57.7	2.4	9.1	5.1	60	150	C11V344X000V00	C11V364X000V00	C11V354X000V00	
119.7	4.9	18.9	10.6	125	150	C11V444X000V00	C11V464X000V00	C11V454X000V00	
155.9	6.4	24.6	13.8	125	150	C11V441X000V00	C11V461X000V00	C11V451X000V00	
260.8	10.8	41.1	23.1	250	100	C11V544X000V00	C11V564X000V00	C11V554X000V00	
360.0	15.0	56.8	32.0	250	25	C11V543X000V00	C11V563X000V00	C11V553X000V00	

