

CHEM-PRO C2 & C3

Feed Rates to 42 GPH
System Pressures to 175 PSI
Diaphragm Failure Detection
PVDF/Teflon/Ceramic Head Components
Full Stroke Every Time Avoids Vapor Lock
Quiet variable Speed Motor
NEMA 4X (IP 66) Washdown
2 Year Warranty

NEMA 4X **CE**



Applications:

- Chemical Metering
- Wastewater Treatment
- Municipal Water Treatment
- Boiler Treatment
- Cooling Tower Treatment
- Acid Injection
- Plating Chemical Injection
- Fluoridation
- Paper / Pulp Chemical Feed
- Fertilizer Injection

Features:

- Operator friendly digital controls with backlit LCD display and DFD alarm display.
- Remote volume control inputs include: 4-20mA, 0-10Vdc, and Pulse inputs for remote external speed control and pulse trigger batching..
- Output rates to 42 GPH (159 LPH).
- System pressures to 175 PSI (12 Bar).
- Oversized PVDF, Ceramic, TFE/P double ball check valves without metal springs.
- Teflon coated Hypalon diaphragm.
- Priming and degassing valve built into the pump head.
- Exceptional output linearity over system pressure.
- Low maintenance, permanently lubricated variable speed gear motor.
- Backlit LCD displays motor speed, input signal values, service and alarm status.
- Includes Diaphragm Failure Detection (DFD) system.
- Compatible with Blue-White's Flow Verification Sensor (FVS) system.
- NO/NC 125V/3A alarm relay monitors the Diaphragm Failure Detection (DFD) system and the Flow Verification Systems (FVS).
- SCADA ready 5-30V DC open collector output loop closes while motor is energized.
- NEMA 4X (IP66) wash-down, chemically resistant powder coated enclosure.
- Complete installation accessories including PVDF injection/check valve, PVDF suction strainer/footvalve, suction tubing, discharge tubing (tube connection models only), prime return tubing, and complete mounting hardware supplied with each pump.

Specifications:**Maximum working pressure:**

175 psig (12 bar) (model specific)

Maximum Fluid temperature:

130°F (54°C)

Operating Temperature:

14°F to 115°F (-10°C to 46°C)

Storage Temperature:

-40°F to 158°F (-40°C to 70°C)

Operating Voltage (Model Specific):

115VAC/60Hz, 1ph (1.5 Amp Maximum)

230VAC/60Hz, 1ph (0.7 Amp Maximum)

220VAC/50Hz, 1ph (1.0 Amp Maximum)

240VAC/50Hz, 1ph (1.0 Amp Maximum)

Power Cord Plug Type (Model Specific):

115V60Hz = NEMA 5/15 (USA)

230V60Hz = NEMA 6/15 (USA)

220V50Hz = CEE 7/II (EU)

240V50Hz = AS 3112 (Australia/New Zealand)

Accuracy:

+/- 2% of full scale

Repeatability +/- 0.5%

Duty cycle:

Continuous

Output adjustment range:

1-100% in 0.1% increments

Maximum viscosity:

1,000 Centipoise

Maximum suction lift:

15 ft. Water, 0 psig (4.5 m, 0 bar)

Display:

Backlit LCD, UV resistant.

Keypad:

Positive action tactile switch keypad.

Enclosure:

NEMA 4X (IP66), Powder coated aluminum.

Maximum overall dimensions:

C2 models: 11-3/4"W x 7-3/4"H x 10-3/4"D (298W x 197H x 274D mm)

C3 models: 13-1/8"W x 9"H x 10-3/4"D (333W x 228H x 274D mm)

Approximate shipping wt:

C2 models: 24 lb. (10.9 Kg)

C3 models: 29 lb. (13.1 Kg)

Materials of Construction:**Wetted components:****Pump Head Assembly:**

Pump Head:PVDF

Adapter Connections:PVDF

Prime/Degassing Valve:PVDF

Valve Cartridges:PVDF

Valve Balls:Ceramic

Valve Ball Seats:TFE/P Tetrafluorethylene/propylene

Static Seals:Viton® (optional EP)

Diaphragm:Teflon® coated Hypalon®

Injection / Back-flow Check valve:

Body & insert:PVDF

Check Ball:Ceramic

Spring:Hastelloy C-276

O-ring seals:Viton® (optional EP)

Foot Valve / Strainer:

Body & Adapter:PVDF

Check Ball:Ceramic

Spring:Hastelloy C-276

O-ring seals:Viton® (optional EP)

Filter screen:Polypropylene

Suction Tubing:Clear PVC**Discharge Tubing**

3/4" x 1/2" Tube connections:Not supplied

1/4" x 3/8" Tube connections:Natural Polyethylene (LLDPE)

Non-Wetted components:**Enclosure:**

413 Aluminum (Polyester powder coated)

Pump Head Cover:

413 Aluminum (Polyester powder coated)

Cover Screws:

300 Series Stainless Steel

DFD System Sensor pins:

Hastelloy C-276

Power Cord:

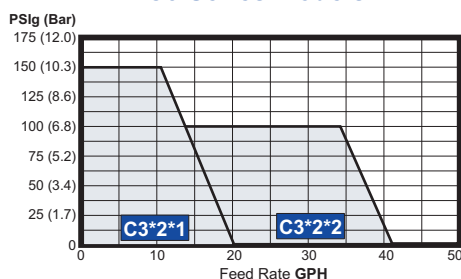
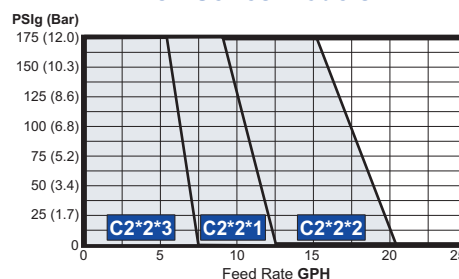
3 conductor, SJTW-A Water-resistant

Tube Installation Tool:

GF Nylon

Mounting Brackets and Hardware:

300 Series Stainless Steel

Output Curves:**C3 Series Models****C2 Series Models**

Control Options Comparison:

Feature	F controls	V controls
DFD (Diaphragm Failure Detection) System Alarm	•	•
FVS (Flow Verification System) Alarm *	•	•
Field Wiring Junction Box	optional	•
Output: One 3 Amp 125VAC (24VDC) Alarm Relay	•	•
Output: Motor Run/Stop Open Collector Loop		•
Local (manual) 100:1 variable Speed Drive Output Control	•	•
Auto Prime	•	•
External Control Inputs: 4-20mA, 0-10VDC, Pulse		•
Operating Modes:		
Manual Adjust Only (100:1 speed adjustment)	•	•
4-20 mA Input Signal		•
0-10 VDC Input Signal		•
High Speed Frequency Input		•
Pulse Triggered Batch Dispensing		•

* Requires Micro-Flo Sensor sold separately

Model Numbers and Output Specifications:
C2 Series Diaphragm Pump | Maximum Strokes per minute 166

Smaller overall size | Higher Pressure Capability | Superior chemical resistance

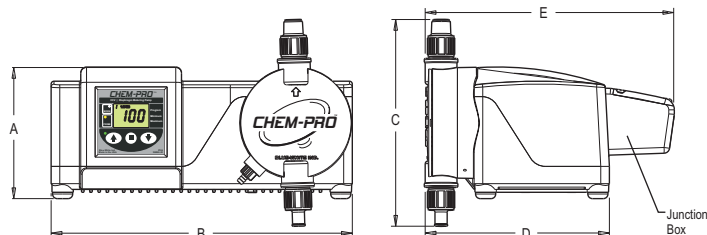
Feed Rate Range at 0 PSIG		Max Pressure	Outlet Connection	C2F Model Numbers			C2V Model Numbers		
GPH	LPH	PSIG (bar)	Size / Type	115V60 AC	230V60 AC	220V50 AC	115V60 AC	230V60 AC	220V50 AC
.07 - 7.1	.27 - 27.0	175 (12)	½" Male NPT	C2F243XVA	C2F253XVA	C2F263XVA	C2V243XVA	C2V253XVA	C2V263XVA
.07 - 7.1	.27 - 27.0	175 (12)	½" Female /NPT	C2F243XVB	C2F253XVB	C2F263XVB	C2V243XVB	C2V253XVB	C2V263XVB
.07 - 7.1	.27 - 27.0	175 (12)	3/4"OD x 1/2"ID TUBE	C2F243XVC	C2F253XVC	C2F263XVC	C2V243XVC	C2V253XVC	C2V263XVC
.07 - 7.1	.27 - 27.0	175 (12)	3/8"OD x 1/4"ID TUBE	C2F243XVD	C2F253XVD	C2F263XVD	C2V243XVD	C2V253XVD	C2V263XVD
.13 - 12.7	.48 - 48.0	175 (12)	½" Male NPT	C2F241XVA	C2F251XVA	C2F261XVA	C2V241XVA	C2V251XVA	C2V261XVA
.13 - 12.7	.48 - 48.0	175 (12)	½" Female NPT	C2F241XVB	C2F251XVB	C2F261XVB	C2V241XVB	C2V251XVB	C2V261XVB
.13 - 12.7	.48 - 48.0	175 (12)	3/4"OD x 1/2"ID TUBE	C2F241XVC	C2F251XVC	C2F261XVC	C2V241XVC	C2V251XVC	C2V261XVC
.13 - 12.7	.48 - 48.0	175 (12)	3/8"OD x 1/4"ID TUBE	C2F241XVD	C2F251XVD	C2F261XVD	C2V241XVD	C2V251XVD	C2V261XVD
.20 - 20.3	.77 - 76.8	175 (12)	½" Male NPT	C2F242XVA	C2F252XVA	C2F262XVA	C2V242XVA	C2V252XVA	C2V262XVA
.20 - 20.3	.77 - 76.8	175 (12)	½" Female /NPT	C2F242XVB	C2F252XVB	C2F262XVB	C2V242XVB	C2V252XVB	C2V262XVB
.20 - 20.3	.77 - 76.8	175 (12)	3/4"OD x 1/2"ID TUBE	C2F242XVC	C2F252XVC	C2F262XVC	C2V242XVC	C2V252XVC	C2V262XVC
.20 - 20.3	.77 - 76.8	175 (12)	3/8"OD x 1/4"ID TUBE	C2F242XVD	C2F252XVD	C2F262XVD	C2V242XVD	C2V252XVD	C2V262XVD

C3 Series Diaphragm Pump | Maximum Strokes per minute 130

Larger overall size | Lower Pressure Capability | Superior chemical resistance

Feed Rate Range at 0 PSIG		Max Pressure	Outlet Connection	C3F Model Numbers			C3V Model Numbers		
GPH	LPH	PSIG (bar)	Size / Type	115V60 AC	230V60 AC	220V50 AC	115V60 AC	230V60 AC	220V50 AC
.19 - 19.7	.74 - 74.6	150 (10.3)	½" Male NPT	C3F241XVA	C3F251XVA	C3F261XVA	C3V241XVA	C3V251XVA	C3V261XVA
.19 - 19.7	.74 - 74.6	150 (10.3)	½" Female /NPT	C3F241XVB	C3F251XVB	C3F261XVB	C3V241XVB	C3V251XVB	C3V261XVB
.19 - 19.7	.74 - 74.6	150 (10.3)	3/4"OD x 1/2"ID TUBE	C3F241XVC	C3F251XVC	C3F261XVC	C3V241XVC	C3V251XVC	C3V261XVC
.19 - 19.7	.74 - 74.6	150 (10.3)	3/8"OD x 1/4"ID TUBE	C3F241XVD	C3F251XVD	C3F261XVD	C3V241XVD	C3V251XVD	C3V261XVD
.42 - 42.0	1.59 - 159	100 (6.8)	½" Male NPT	C3F242XVA	C3F252XVA	C3F262XVA	C3V242XVA	C3V252XVA	C3V262XVA
.42 - 42.0	1.59 - 159	100 (6.8)	½" Female NPT	C3F242XVB	C3F252XVB	C3F262XVB	C3V242XVB	C3V252XVB	C3V262XVB
.42 - 42.0	1.59 - 159	100 (6.8)	3/4"OD x 1/2"ID TUBE	C3F242XVC	C3F252XVC	C3F262XVC	C3V242XVC	C3V252XVC	C3V262XVC
.42 - 42.0	1.59 - 159	100 (6.8)	3/8"OD x 1/4"ID TUBE	C3F242XVD	C3F252XVD	C3F262XVD	C3V242XVD	C3V252XVD	C3V262XVD

Dimensions:



Dim	C2 Series		C3 Series	
	Inches	mm	Inches	mm
A	5-7/8"	148	5-3/4"	145
B	11-3/4"	298	13-1/8"	333
C	7-3/4"	197	9"	228
D	8"	203	8"	203
E	10-3/4"	274	10-3/4"	274

Model Number Matrix:

Chem-Pro Model Number									
C	Chem-Pro Diaphragm Metering Pump								
Series									
2	Smaller overall size, higher pressure capability								
3	Larger overall size, lower pressure capability								
Control Features									
F	Manual (local) control mode only								
V	Multiple input control and alarm modes (Local and remote control)								
Maximum Strokes per Minute									
2	C2 series = 166, C3 series = 130								
Input Voltage / Power Cord									
4	115V / 60Hz, power cord NEMA 5/15 plug (US)								
5	230V / 60Hz, power cord NEMA 6/15 plug (US)								
6	220V / 50HZ, power cord CEE 7/VII plug (EU)								
8	240V / 50HZ, power cord AS 3112 plug (Australia/New Zealand)								
Stroke Length / Diaphragm size									
		C2 Series pumps				C3 Series pumps			
1	.060" stroke / small diaphragm				1	.060" stroke / large diaphragm			
2	.060" stroke / large diaphragm				2	.100" stroke / large diaphragm			
3	.040" stroke / small diaphragm								
4	.100" stroke / large diaphragm								
Electrical Options									
X	Standard Equipment ("V" control models include a power cord and field wiring box) ("F" control models include a power cord only)								
P	Add a power cord and field wiring box to "F" control models only								
Elastomer Material (o-rings)									
V	Viton								
E	EP								
Pump Head Outlet Fitting and Injection Fitting / Check Valve Connections									
A	1/2" Male NPT pump head, with 1/2" M/NPT injection fitting								
B	1/2" Female NPT pump head, with 1/2" M/NPT injection fitting								
C	1/2" ID x 3/4" OD tubing pump head, with 1/2" ID x 3/4" OD tubing injection fitting								
D	1/4" ID x 3/8" OD Tubing pump head, with 1/4" ID x 3/8" OD tubing injection fitting								
C	2	V	2	4	2	X	V	D	Sample Model Number