

### CHEM-PRO® CD3

1,000:1 Turndown ratio

50% more energy efficient, Patent Pending Design

Revolution Count Display & Alarm

Brushless DC Motor

NEMA 4X (IP 66) Washdown

2 Year Warranty

Multi-diaphragm technology eliminates vapor locking

**Sold and serviced exclusively by highly skilled, factory authorized technicians.**



Multiple Patents Pending in USA and UK



### Applications:

- Wastewater Treatment
- Chemical Metering
- Chlorination
- Chloramination
- Fluoridation
- Polymer Injection
- Acid Injection
- PAC Injection
- Caustic Injection
- PAA Injection
- Fertilizer Injection
- Paper/Pulp Chemical Feed
- Plating Chemical Injection

### Features:

- Smooth chemical dosing, no pulsation dampener needed
- Simple installation and setup with built-in controls, Drop-in-place
- Built for long life at high pressures, 2 year warranty
- Output rates to: 53 GPH (201 LPH) and pressures to 145 PSI (10 Bar)
- 1,000:1 turndown ratio with high resolution motor speed adjustment.
- No maintenance brushless variable speed motor.
- Included wetted end fittings allow for more than 14 inlet and outlet configurations
- Quick visual inspection with built in LED light.
- Control Inputs include: 4-20mA, 0-10Vdc, and Pulse inputs for remote external speed or batch control and 0-30 VDC / contact closure remote start/stop.
- Stroke count display with user programmable alarm set-point for diaphragm maintenance.
- VGA Graphic multi-color backlit LCD displays remote/local control status, motor speed, output rate, input signal values, service and alarm status in three easy to see colors.
- Outputs include: Scalable 4-20mA or pulse, one 250V/6A relay and three 115V/1A contact closures assignable to monitor various pump functions including DFD, FVS, revolution counter, remote/local, input signals, output signals, motor, on, motor fault, operating mode setting, and others.
- Wetted ends constructed out of PVDF
- Compatible with Blue-White's output Flow Verification Sensor (FVS) system.

**Engineering Specifications:****Maximum Working Pressure**

145 psig (10 bar)

**Maximum Fluid Temperature**

PVDF connections: 185°F (85°C)

**Ambient Operating Temperature**

14°F to 115°F (-10°C to 46°C)

**Ambient Storage Temperature**

-40°F to 158°F (-40°C to 70°C)

**Operating Voltage**

96 to 264VAC-50/60Hz, 220 VA

**Power Cord Options**

115V60Hz = NEMA 5/15 (USA)

230V60Hz = NEMA 6/15 (USA)

220V50Hz = CEE 7/II (EU)

240V50Hz = AS 3112 (Australia/New Zealand)

230V50Hz = BS 1363/A plug (United Kingdom)

**Enclosure**

NEMA 4X (IP66), Polyester powder coated aluminum.

**Maximum Overall Dimensions**

16-1/8"W x 15-1/4"H x 15-5/16"D (40.9W x 38.7H x 38.9D cm)

**Approximate Shipping WT**

53 lb. (24.04 Kg)

**Motor**

1/4 HP Brushless DC motor

**Motor Speed Adjustment Range**

1,000:1 (0.1% - 100% motor speed)

**Motor Speed Adjustment Resolution**

0.1% increments &gt; 10% motor speed

0.01% increments &gt; 1% motor speed and &lt; 10%

0.001% increments &lt; 1% motor speed

**Maximum Viscosity**

1,000 Centipoise

**Maximum Suction Lift**

23 ft. Water, 0 psig (7 m, 0 bar)

**Display**

3 color VGA backlit LCD, UV resistant.

**Display Resolution**

0.0 &gt; 10% motor speed

0.00 &gt; 1% motor speed and &lt; 10%

0.000 &lt; 1% motor speed

**Display Languages**

English, Spanish, French or German selectable.

**Keypad**

Eleven button positive action tactile switch keypad.

**Security**

Programmable 4-digit password.

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

Pump Head: .....PVDF

Adapter Connections: .....PVDF

Valve Cartridges: .....PVDF

Valve Balls: .....Ceramic

Elastomers: .....TFE/P Tetrafluorethylene/propylene

Static Seals: .....TFE/P (optional EP)

Diaphragm: .....PVDF (optional Flex-A-Prene®)

**Non-Wetted components:****Enclosure**

413 Aluminum (Polyester powder coated)

**Drive Enclosure**

Valox® (PBT) thermoplastic

Permanently lubricated sealed motor shaft support ball bearing.

**Drive Enclosure Cover**

Polycarbonate for added strength and chemical resistance.

**Cover Screws**

300 Series Stainless Steel

**Pump Head Cover**

316 Stainless Steel

**Motor Shaft**

Chrome plated steel

**DFD System Sensor pins**

Hastelloy C-276

**Power Cord**

3 conductor, SJTW-A Water-resistant

**Mounting Brackets and Hardware:**

316 Stainless Steel

**Recommended Ancillary Items Sold Separately****Injection / Back-flow Check valve:**

Body &amp; insert: .....PVDF

Check Ball: .....Ceramic

Spring: .....Hastelloy C-276, 6 lbs.

O-ring seals: .....TFE/P (optional EP)

**Foot Valve / Strainer:**

Body &amp; Adapter: .....PVDF

Check Ball: .....Ceramic

Spring: .....Hastelloy C-276, 6 lbs.

O-ring seals: .....TFE/P (optional EP)

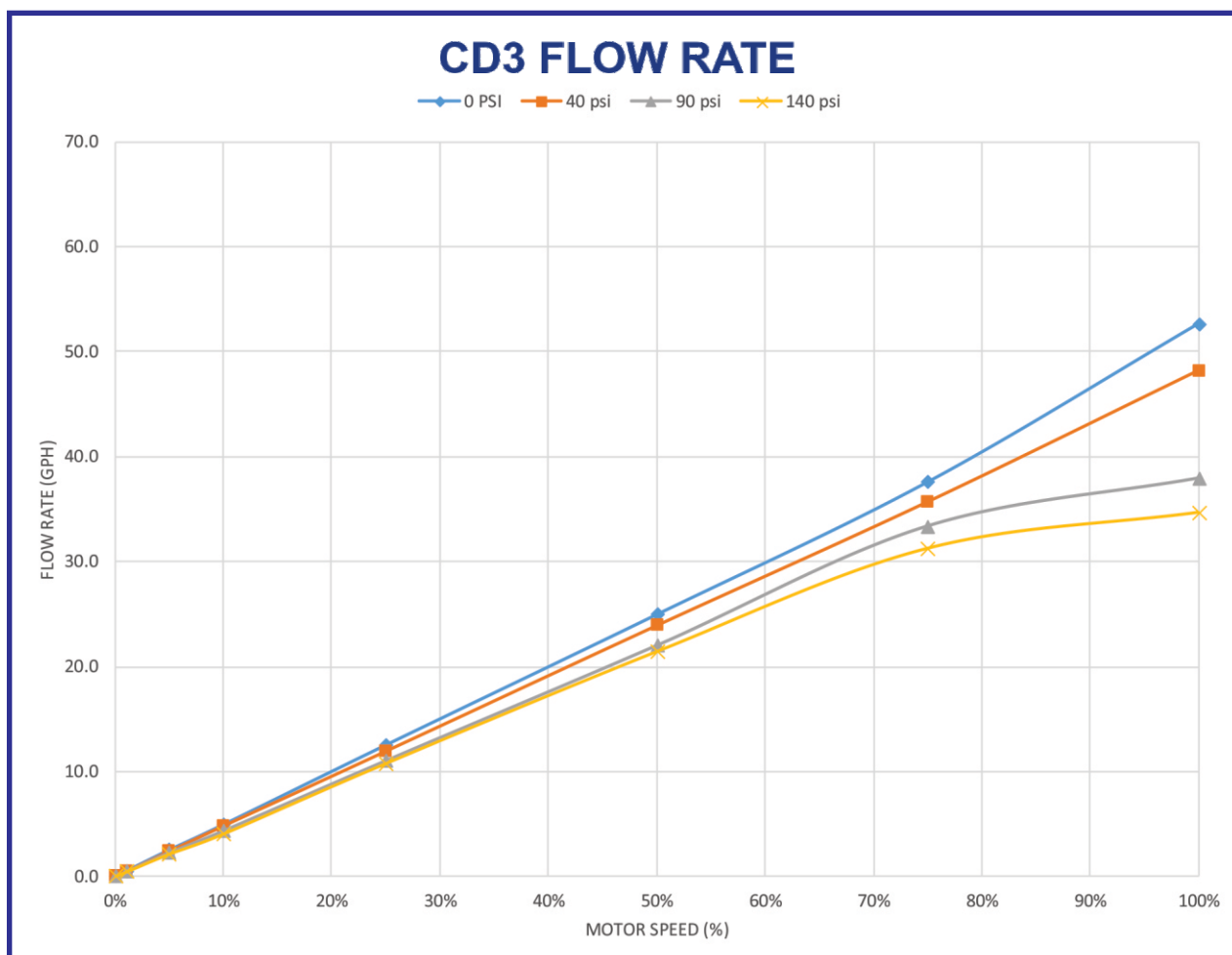
Filter screen: .....PVDF

**Pressure versus Output\*:**

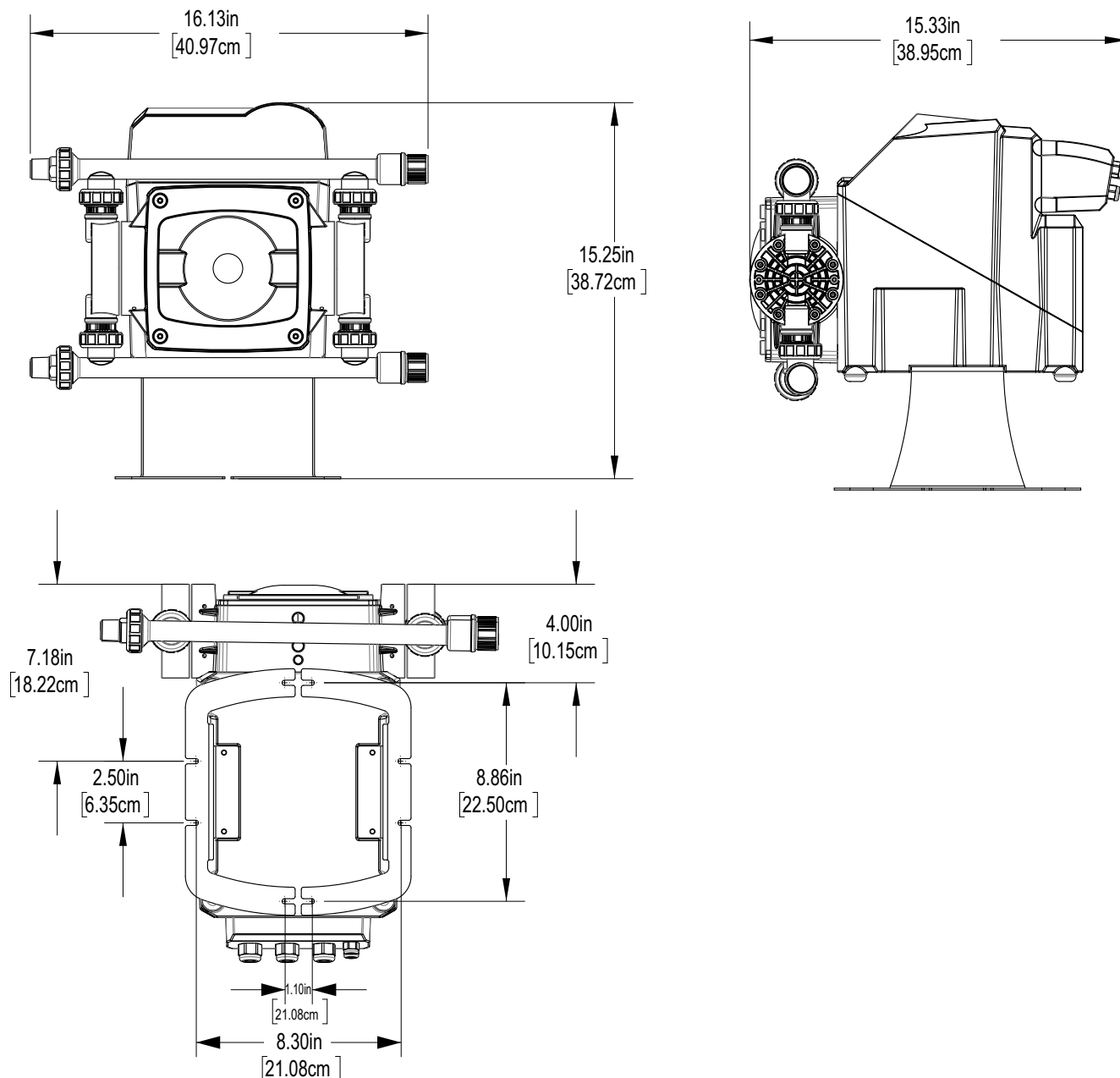
## Cd3 Multi-Diaphragm Metering Pump

190 Strokes per minute

Motor Speed (%)	Feed Rate at 0 PSig			Feed Rate at 40 PSig			Feed Rate at 90 PSig			Feed Rate at 140 PSig		
	RPM	ML/MIN	GPH	RPM	ML/MIN	GPH	RPM	ML/MIN	GPH	RPM	ML/MIN	GPH
1	1.3	32	0.5	1.3	32	0.5	1.3	25	0.4	1.3	25	0.4
5	10	164	2.6	10	151	2.4	10	145	2.3	10	132	2.1
10	19	315	5.0	19	303	4.8	19	278	4.4	19	259	4.1
25	48	789	12.5	48	751	11.9	48	694	11.0	48	681	10.8
50	95	1577	25.0	95	1508	23.9	95	1388	22.0	95	1350	21.4
75	142	2372	37.6	142	2252	35.7	142	2107	33.4	142	1968	31.2
100	190	3318	52.6	190	3041	48.2	190	2391	37.9	190	2182	34.6



### Dimensions:



### Extended Brackets

Stainless Steel extended brackets allow the pump to be securely mounted to most any surface; floor, shelf, or skid.

- Made out of tough Stainless Steel.
- Provides a stable mounting surface.



**Model Number Matrix:**

Multi-Diaphragm Model Number									
CD3	Multi-Diaphragm Metering Pump								
Maximum Strokes per Minute									
2	190 RPM								
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)								
9	230V / 50HZ, power cord BS 1363/A plug (United Kingdom)								
X	No Power Cord								
Stroke Length / Diaphragm size									
4	.090" stroke / large diaphragm								
Electrical Options									
X	Standard Equipment - includes power cord and field wiring box								
Elastomer Material (O-Rings)									
V	TFE/P								
E	EP								
Pump Head Fittings and Footvalve									
X	Standard Equipment - Includes 1/2" Barb Fittings (Straight & Elbow Adapters), 1/2" MPT Fittings (Straight and Elbow Adapters) & 1/2" MPT Footvalve								
Miscellaneous Options (Leave Blank If Not Used)									
S	Flex-a-prene® Diaphragms (Caustic Soda resistant diaphragms)								
CD3	2	4	4	X	V	X	-	S	Sample Model Number

**Features list:**

Features
DFD (Diaphragm Failure Detection) System Alarm
FVS (Flow Verification System) Alarm - Requires Micro-Flo Sensor (sold separately)
1,000:1 turndown reversible motor
Automated PPM chemical dosing system
Revolution counter with user programmable alarm set-point.
Set maximum motor RPM limit
Power interruption re-start options
Four output contacts can be triggered by DFD (Diaphragm Failure Detection) System Alarm, FVS system, general alarm, motor run/stop, revolution count, motor fail, remote/local setting, input signal failure, output signal failure, and currently active operating mode.
Output: One, 6 amp alarm relay (NO/NC)
Output: Three, dry contact or maximum 30VDC/115VAC 1 amp contact closures (NO/NC)
Output: Programmable 4-20mA signal or high speed pulse, proportional to pump output
Input: One, contact closure (remote start / stop)
Input: Remote speed control via 4-20mA, 0-10VDC, high speed digital pulse, contact closure pulse
Remote/Local control settings
Password protection
Display: Motor speed, Flow Verification System (FVS) alarm status, Diaphragm Failure Detection System (DFD) alarm status
Display: Output in ml/min, oz/min, L/hr, Gal/hr, Gal/day, RPM, and input signal values

Available Operating Modes:
Manual (local): speed adjustment
Remote input: 4-20mA
Remote input: 0-10 VDC
Remote input: high speed frequency (pulse) input
Remote input: pulse triggered batch dispensing
Remote input: proportional PPM (parts per million) dosing with high speed frequency (pulse) input
Manual (local): batch dispensing
Manual (local): repeating cycle timer
Manual (local): fixed speed PPM (parts per million) dosing

Factory Authorized Representative: