


# CD1

## Multi-Diaphragm Metering Pump



### Features

- > Smooth chemical dosing, no pulsation dampener needed
- > Diaphragm Failure Detection (DFD) system senses diaphragm failure
- > Exclusive DiaFlex® Diaphragm guaranteed to last the life of the pump
- > SCADA Inputs include: 4-20mA (on "V" models), Remote Start/Stop
- > SCADA Outputs include: 4-20mA (on "V" models), single 250V/3A Relay (DFD/FVS), and a single solid state (Motor On)

Video link: 



**NEMA 4X**

### Highlights

**Flow range**

0.004 - 8.50 GPH, 0 PSI  
0.004 - 7.50 GPH, 150 PSI

**Pressures**

Up to 150 PSI  
(10.3 bar)

**Turndown ratio**

2,000 : 1

**Exclusive**

Diaphragm Failure Detection (DFD)

**Motor**

Brushless DC Motor

**Warranty**

2 Years

### Control Methods

Control Methods	Manual Control	4-20mA Input	Remote Start/Stop	4-20mA Output	Alarm Output	FVS	Motor Status Output
CD1F	•		•		•	•	•
CD1V	•	•	•	•	•	•	•

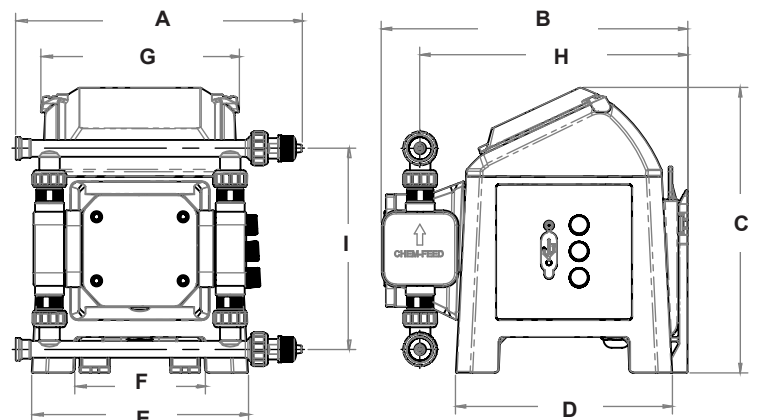


<b>Maximum Working Pressure</b>	Up to 150 psig (10.3 bar)*
<b>Maximum Fluid Temperature</b>	Up to 185 °F (85 °C)
<b>Maximum Ambient Temperature</b>	14 °F to 115 °F / -10 °C to 46 °C
<b>Maximum Viscosity</b>	1,000 Centipoise
<b>Maximum Suction Lift</b>	20 ft. at 0 PSI
<b>Operating Voltage Range</b>	100 to 240VAC-50/60Hz
	115V50/60Hz = NEMA 5/15 (USA)
	230V50/60Hz = NEMA 6/15 (USA)
<b>Power Cord Options</b>	220V50/60Hz = CEE 7/VII (EU)
	240V50/60Hz = AS 3112 (Australia/New Zealand)
	230V50/60Hz = BS 1363/A (UK)
<b>Signal Connectors</b>	M12 - 5 pin (IP67 rated connectors on "V" models)
<b>Motor</b>	Brushless DC, 50W
<b>Duty Cycle</b>	Continuous
<b>Turndown Ratio</b>	2,000:1, (0.05% – 100%) Max Motor rpm = 100 (200 strokes/min)
<b>Maximum Overall Dimensions</b>	9.5" W x 9.5" H x 10.4" D (24.1 W x 24.1 H x 26.4 D cm)
<b>Product Weight</b>	8.5 lb. (3.8 Kg)
<b>Approximate Shipping Dimensions</b>	10.5" W x 11.75" H x 13" D (26.7 W x 29.8 H x 33 D cm)
<b>Approximate Shipping Weight</b>	15.5 lb. (7.0 Kg)
<b>Enclosure</b>	NEMA 4X (IP66), Valox® (PBT)
<b>RoHS Compliant</b>	Yes
<b>Standards</b>	cETLus, CE

\* Refer to "Flow rate vs Pressure" graph for details.

## Dimensions

Dim	Inch	cm	Dim	Inch	cm
A	9.49"	24.10	F	4.32"	10.98
B	10.15"	25.78	G	6.57"	16.69
C	9.46"	24.02	H	8.87"	22.54
D	7.18"	18.23	I	6.67"	16.94
E	7.18"	18.23			



## Non-wetted Components:

**Enclosure:** Valox® (PBT)

**Control Panel Cover:** Polycarbonate

**Drive Enclosure:** Valox® (PBT) & PA12

**Pump Head Cover:** Polycarbonate

**Cover Screws:** Stainless steel, polypropylene cap

**DFD System Sensor Pins:** Hastelloy C-276

**Power Cord:** 3 conductor, SJTW-A water-resistant

**Hardware:** 316 stainless steel screws

**Mounting Brackets:** Nylon

## Wetted Components:

Pump Head : PVDF

Adapter Connections: PVDF

Valve Cartridges : PVDF

Valve Balls : Ceramic

O-Ring Seals : TFE/P (optional EP)

Diaphragm : DiaFlex® (optional Flex-A-Prene®)

## Pump Head Assembly:

## Ancillary Items Provided:

Suction Tubing : 3/8" OD x 1/4" ID x 5' Clear PVC

Discharge Tubing : 3/8" OD x 1/4" ID x 5' Polyethylene

Body & Insert : PVDF

## Injection / Back-Flow Check Valve:

Check Ball : Ceramic

Spring : Hastelloy C-276, 6 lbs.

O-Ring Seals : TFE/P (optional EP)

Body & Adapter : PVDF

Check Ball : Ceramic

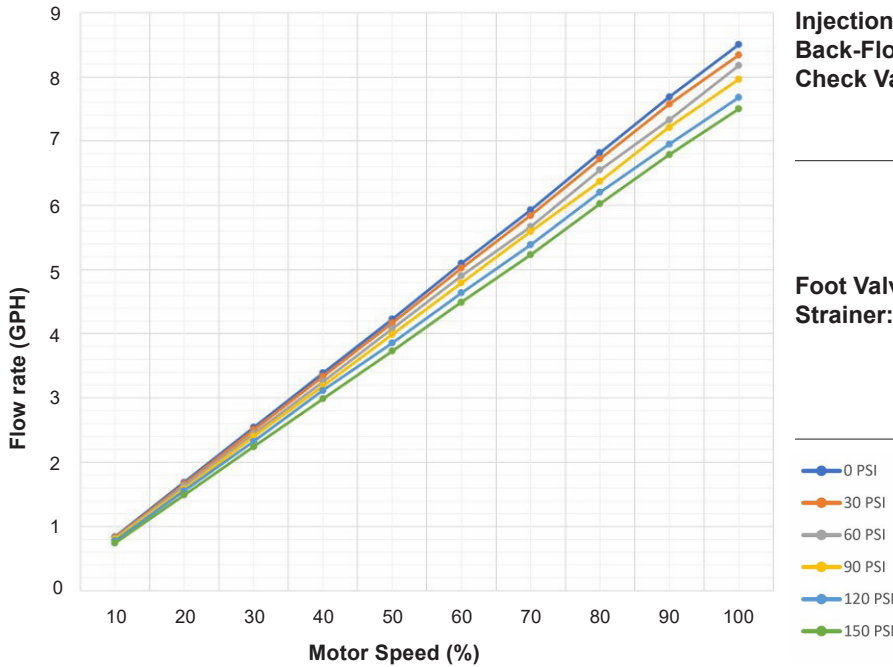
## Foot Valve / Strainer:

Spring : Hastelloy C-276, 6 lbs.

O-Ring Seals : TFE/P (optional EP)

Filter Screen : PVDF

## Performance



Motor Speed %	Flowrate (Gal/hr), Pressure						Flowrate (mL/min), Pressure					
	0 PSI	30 PSI	60 PSI	90 PSI	120 PSI	150 PSI	0 PSI	30 PSI	60 PSI	90 PSI	120 PSI	150 PSI
	0 Bar	2.1 Bar	4.2 Bar	6.2 Bar	8.3 Bar	10.3 Bar	0 Bar	2.1 Bar	4.2 Bar	6.2 Bar	8.3 Bar	10.3 Bar
10	0.83	0.82	0.81	0.80	0.78	0.74	52.7	51.9	51.0	50.7	48.9	46.5
20	1.68	1.66	1.63	1.58	1.55	1.49	106.3	104.7	102.8	100.0	98.0	93.8
30	2.54	2.50	2.44	2.40	2.32	2.24	160.3	157.9	154.2	151.3	146.6	141.4
40	3.39	3.34	3.26	3.19	3.12	2.99	213.7	210.6	205.4	201.3	196.6	188.6
50	4.23	4.17	4.08	3.99	3.86	3.73	266.8	262.9	257.5	251.9	243.3	235.4
60	5.10	5.02	4.90	4.79	4.63	4.49	321.6	316.9	309.1	302.2	292.4	283.3
70	5.93	5.84	5.67	5.59	5.38	5.23	373.9	368.5	357.6	352.7	339.6	330.0
80	6.82	6.72	6.55	6.37	6.20	6.02	430.2	424.0	413.1	402.1	391.1	379.9
90	7.69	7.58	7.33	7.21	6.95	6.79	485.1	478.0	462.6	455.2	438.4	428.1
100	8.50	8.34	8.18	7.96	7.68	7.50	536.3	526.0	516.0	502.0	484.4	473.3


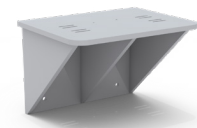






# Model Number Matrix

CD1

## CHEM-FEED® Model Number

<b>CD1</b>	CHEM-FEED® Diaphragm Metering Pump (includes 1/4" x 3/8" compression tubing connection for suction/discharge - see accessories for other options)				
<b>Control</b>					
<b>F</b>	Standard Control Methods (Manual, Remote, FVS)				
<b>V</b>	4-20mA Input, 4-20mA Output, in addition to Standard Control Methods (Manual, Remote, FVS)				
<b>Diaphragm and O-Rings Material</b>					
<b>V</b>	DiaFlex® Diaphragms and TFE/P O-Rings (For all chemicals excluding caustic soda and aqueous ammonia)				
<b>E</b>	Flex-A-Prene® Diaphragms and EP O-Rings (For caustic soda and aqueous ammonia)				
<b>Power Cord - Removable (Operating voltage requirement 96VAC to 264VAC)</b>					
<b>4</b>	115V 50/60Hz, power cord NEMA 5/15 plug (US)				
<b>6</b>	220V 50/60Hz, power cord CEE 7/11 plug (EU)				
<b>X</b>	No Power Cord Provided (Power cord is required - See accessories for power cord options)				
<b>CD1</b>	<b>F</b>	<b>V</b>	<b>1</b>	<b>4</b>	<b>Sample Model Number</b>

## Accessories

 <p><b>KIT-S07</b> <b>KIT-S15</b> <b>KIT-S30</b></p> <p>* Includes cover and foot valve</p> <p>KIT-S07 (7 Gallon), KIT-S15 (15 Gallon), KIT-S30 (30 Gallon) STAR III TANKS, PP</p>	 <p><b>KIT-PSM</b> WALL MOUNT BRACKET, HDPE</p>		
<p><b>Teflon Ball Check Cartridge Valve Kit (PVDF body, TFE/P O-rings, PTFE balls) 4 cartridges included.</b></p> <p><b>20000-177 PTFE Ball Checks</b></p>	 <p><b>KIT-C5M</b> 1/2" MNPT Connector Kit</p>	 <p><b>KIT-C5B</b> 1/2" HOSE BARB Connector Kit</p>	 <p><b>KIT-CQA (Aflas) / KIT-CQE (EP)</b> QUICK CONNECT KIT MD1</p>
<p><b>POWER CABLES - 6 ft</b> 90010-663 115V/60Hz NEMA 5/15 90010-664 220V/50Hz CEE 7/11 90010-665 230V/50Hz BS 1363/A 90010-666 240V/50Hz AS 3112 90010-696 230V/60Hz NEMA 6/15 <b>USB Cable</b> CABLE-UAC USB A-C 3 ft</p> <p><b>POWER / USB CABLES</b></p>	 <p><b>KIT-M12</b> TWO M12 CABLES - 9.8 ft</p>	 <p><b>71000-577</b> PVDF INJECTOR, 1/2" MNPT</p>	 <p><b>71000-849</b> FOOT VALVE, 1/2" MNPT</p>