


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, Remote Start/Stop
- > Relay outputs: single 250V/3A (DFD) and single solid state (Motor On)

Video link: 



Highlights

Flow range

.004 - 7.70 GPH
.015 - 29.2 LPH

Pressures

150 PSI
(10.3 bar)

Turndown ratio

2,000 : 1

Exclusive

Diaphragm Failure Detection
(DFD)

Motor

Brushless
DC Motor

Warranty

2 Years

Control Methods

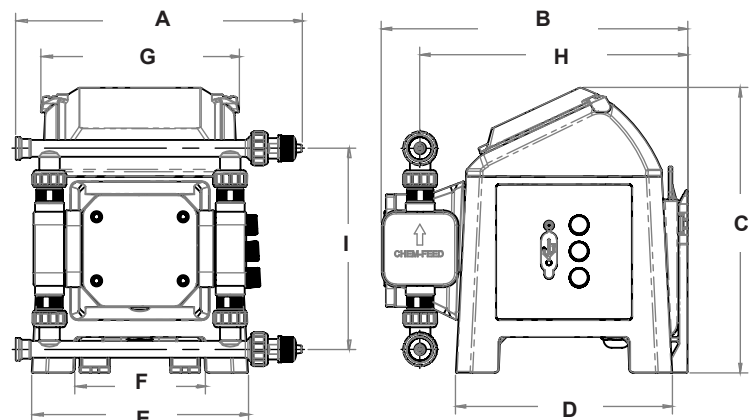
Control Methods	Manual Control	4-20mA Input	Remote Start/Stop	Alarm Output	FVS	Motor Status Output
CD1F	•		•	•	•	•
CD1V	•	•	•	•	•	•



Maximum Working Pressure	150 psig (10.3 bar)
Maximum Fluid Temperature	185 °F (85 °C)
Maximum Ambient Temperature	14 °F to 115 °F / -10 °C to 46 °C
Maximum Viscosity	1,000 Centipoise
Maximum Suction Lift	20 ft. at 0 PSI
Operating Voltage Range	100 to 240VAC-50/60Hz
	115V50/60Hz = NEMA 5/15 (USA)
	230V50/60Hz = NEMA 6/15 (USA)
Power Cord Options	220V50/60Hz = CEE 7/VII (EU)
	240V50/60Hz = AS 3112 (Australia/New Zealand)
	230V50/60Hz = BS 1363/A (UK)
Motor	Brushless DC, 50W
Duty Cycle	Continuous
Turndown Ratio	2,000:1, (0.05% – 100%) Max rpm = 100
Maximum Overall Dimensions	7-1/4" W x 9" H x 10" D (18.5 W x 22.9 H x 25.2 D cm)
Product Weight	8.5 lb. (3.8 Kg)
Approximate Shipping Dimensions	10-1/2" W x 13 3/4" H x 11" D
Approximate Shipping Weight	15.5 lb. (7.0 Kg)
Enclosure	NEMA 4X (IP66), Valox® (PBT) & PA12
RoHS Compliant	Yes
Standards	cETLus, CE

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) & PA12

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

Pump Head Assembly:

Valve Cartridges : PVDF

Valve Balls : Ceramic

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

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

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:

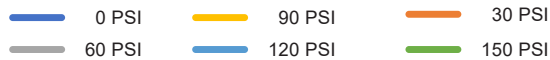
Spring : Hastelloy C-276, 6 lbs.

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

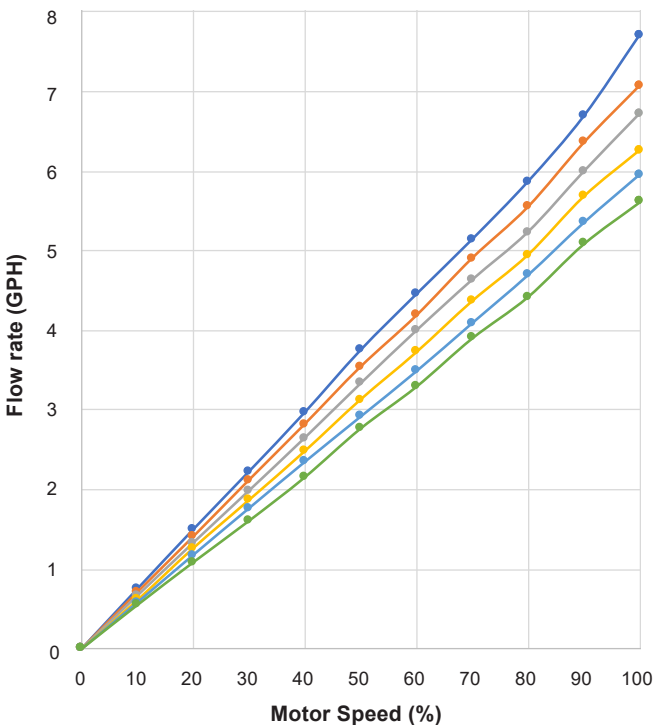
Filter Screen : PVDF

Performance

CHEM-FEED® CD1 Metering Pump



Flow rate vs Pressure





Motor Speed	Flow Rate GPH Pressure					
	0 PSI	30 PSI	60 PSI	90 PSI	120 PSI	150 PSI
0%	0	0	0	0	0	0
10%	0.75	0.71	0.67	0.61	0.58	0.55
20%	1.50	1.41	1.33	1.26	1.18	1.09
30%	2.22	2.12	1.98	1.87	1.76	1.61
40%	2.97	2.82	2.65	2.48	2.35	2.16
50%	3.75	3.54	3.33	3.13	2.91	2.77
60%	4.45	4.18	3.99	3.72	3.48	3.29
70%	5.14	4.90	4.63	4.37	4.09	3.90
80%	5.86	5.55	5.23	4.95	4.69	4.42
90%	6.68	6.35	5.99	5.68	5.35	5.08
100%	7.70	7.07	6.71	6.26	5.95	5.61

CHEM-FEED® Model Number

CD1	CHEM-FEED® Diaphragm Metering Pump				
Series					
F	Standard Control Methods (Manual, Remote, FVS)				
V	4-20mA Input in addition to Standard Control Methods (Manual, Remote, FVS)				
Diaphragm and O-Rings Material					
V	DiaFlex® Diaphragms and TFE/P O-Rings (For all chemicals excluding caustic soda and aqueous ammonia)				
E	Flex-A-Prene® Diaphragms and EP O-Rings (For caustic soda and aqueous ammonia)				
Power Cord (Operating voltage requirement 96VAC to 264VAC)					
4	115V 50/60Hz, power cord NEMA 5/15 plug (US)				
5	230V 50/60Hz, power cord NEMA 6/15 plug (US)				
6	220V 50/60Hz, power cord CEE 7/V11 plug (EU)				
8	240V 50/60Hz, power cord AS 3112 plug (Australia/New Zealand)				
9	230V 50/60Hz, power cord BS 1363/A plug (UK)				
CD1	F	V	1	4	Sample Model Number

Accessories

 <p>KIT-S07 (7 Gallon), KIT-S15 (15 Gallon), KIT-S30 (30 Gallon) STAR III TANKS, PP</p> <p><small>* Includes suction tubing and foot valve</small></p>	 <p>KIT-PSM WALL MOUNT BRACKET, HDPE</p>	 <p>CABLE-UAC USB A-C CABLE - 3 ft.</p>	
 <p>KIT-MB FLOOR MOUNTING BRACKETS</p>	 <p>KIT-C5B CD1 1/2" HOSE BARB - 5 ft.</p>	 <p>KIT-M12 TWO M12 CABLES - 9.8 ft</p>	 <p>KIT-CQA QUICK CONNECT CD1 AFLAS</p>

NOTE: Accessories sold separately. *KIT-C5M FOR 1/2" M/NPT *KIT-M12-3 FOR 3 M12 CABLES *KIT-CQE FOR EP O-RINGS

P.N. #85000-154 CD1 Rev. 7 20221003

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