

CD1

Multi-Diaphragm Metering Pump



Video link: 



NEMA 4X

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)

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	•	•	•	•	•	•	•

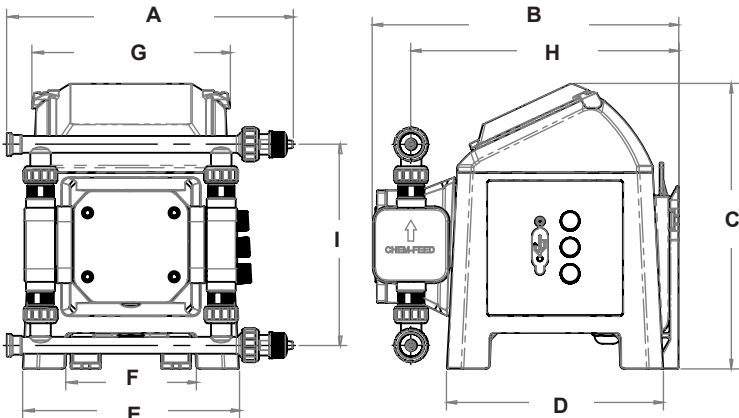


Maximum Working Pressure	Up to 150 psig (10.3 bar)*
Maximum Fluid Temperature	Up to 185 °F (85 °C)
Maximum Ambient Temperature	14 °F to 115 °F / -10 °C to 46 °C
Maximum Viscosity	1,000 Centipoise
Maximum Suction Lift	20 ft. at 0 PSI
Operating Voltage Range	100 to 240VAC-50/60Hz
Power Cord Options	115V50/60Hz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

* Refer to “Flow rate vs Pressure” graph for details.

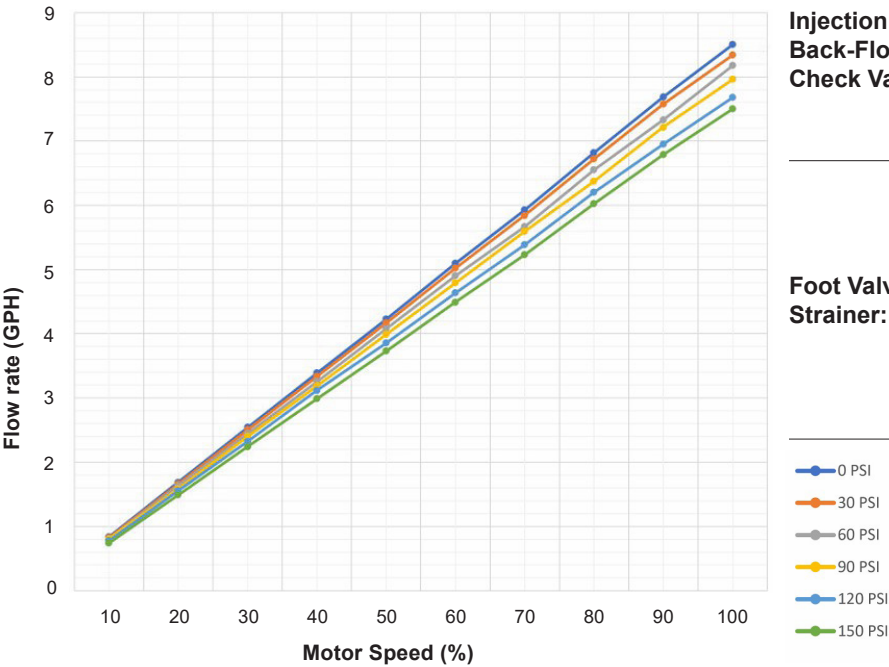
Dimensions

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:	Wetted Components:
Enclosure: Valox® (PBT)	Pump Head : PVDF
Control Panel Cover: Polycarbonate	Adapter Connections: PVDF
Drive Enclosure: Valox® (PBT) & PA12	Pump Head Assembly: Valve Cartridges : PVDF
Pump Head Cover: Polycarbonate	Valve Balls : Ceramic
Cover Screws: Stainless steel, polypropylene cap	O-Ring Seals : TFE/P (optional EP)
DFD System Sensor Pins: Hastelloy C-276	Diaphragm : DiaFlex® (optional Flex-A-Prene®)
Power Cord: 3 conductor, SJTW-A water-resistant	Ancillary Items Provided:
Hardware: 316 stainless steel screws	Suction Tubing : 3/8" OD x 1/4" ID x 5' Clear PVC
Mounting Brackets: Nylon	Discharge Tubing : 3/8" OD x 1/4" ID x 5' Polyethylene

Performance



Injection / Back-Flow Check Valve:	Body & Insert : PVDF
	Check Ball : Ceramic
	Spring : Hastelloy C-276, 6 lbs.
	O-Ring Seals : TFE/P (optional EP)
Foot Valve / Strainer:	Body & Adapter : PVDF
	Check Ball : Ceramic
	Spring : Hastelloy C-276, 6 lbs.
	O-Ring Seals : TFE/P (optional EP)
	Filter Screen : PVDF

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

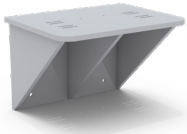
Model Number Matrix

CD1

CHEM-FEED® Model Number

CD1	CHEM-FEED® Diaphragm Metering Pump (includes 1/4" x 3/8" compression tubing connection for suction/discharge - see accessories for other options)			
Control				
F	Standard Control Methods (Manual, Remote, FVS)			
V	4-20mA Input, 4-20mA Output, 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 - Removable (Operating voltage requirement 96VAC to 264VAC)				
4	115V 50/60Hz, power cord NEMA 5/15 plug (US)			
6	220V 50/60Hz, power cord CEE 7/V11 plug (EU)			
X	No Power Cord Provided (Power cord is required - See accessories for power cord options)			
CD1	F	V	1	4
Sample Model Number				

Accessories

 KIT-S07 KIT-S15 KIT-S30 * Includes cover and foot valve KIT-S07 (7 Gallon), KIT-S15 (15 Gallon), KIT-S30 (30 Gallon) STAR III TANKS, PP		 KIT-PSM WALL MOUNT BRACKET, HDPE	
Teflon Ball Check Cartridge Valve Kit (PVDF body, TFE/P O-rings, PTFE balls) 4 cartridges included. 20000-177 PTFE Ball Checks	 KIT-C5M 1/2" MNPT Connector Kit	 KIT-C5B 1/2" HOSE BARB Connector Kit	 KIT-CQA (Aflas) / KIT-CQE (EP) QUICK CONNECT KIT MD1
POWER CABLES - 6 ft 90010-663 115V/60Hz NEMA 5/15 90010-664 220V/50Hz CEE 7/V11 90010-665 230V/50Hz BS 1363/A 90010-666 240V/50Hz AS 3112 90010-696 230V/60Hz NEMA 6/15 USB Cable CABLE-UAC USB A-C 3 ft POWER / USB CABLES	 KIT-M12 TWO M12 CABLES - 9.8 ft	 71000-577 PVDF INJECTOR, 1/2" MNPT	 71000-849 FOOT VALVE, 1/2" MNPT