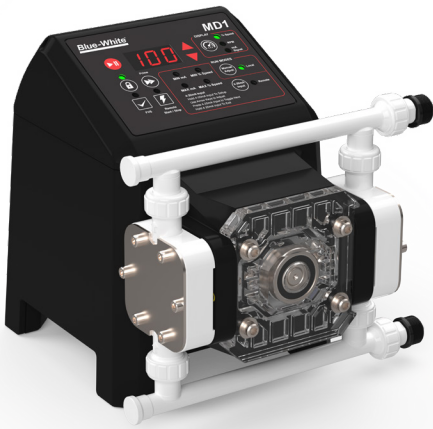


MD1

CHEM-FEED® Multi-Diaphragm Metering Pump



MD1C Model

Features

- > Enhanced Multi-diaphragm technology delivers smooth, nearly pulse-less chemical feed
- > Double ball checks increase pumping reliability
- > Unique pump head ensures correct ball check direction
- > Leak detection (DFD) senses diaphragm failure and stops pump
- > Exclusive DiaFlex® Diaphragm minimizes maintenance
- > “C” Control Model includes multiple Input/Output options
- > “B” Base Model includes manual speed control

Video link: 



NEMA 4X

Highlights

Flow range

0.0007 - 7.0 GPH
0.0026 - 26.46 LPH

Pressures

Up to 180 PSI*
(12.4 bar)

Turndown ratio

10,000 : 1

Suction lift

20 ft. (at 0 PSI)

Motor

Brushless DC

Warranty

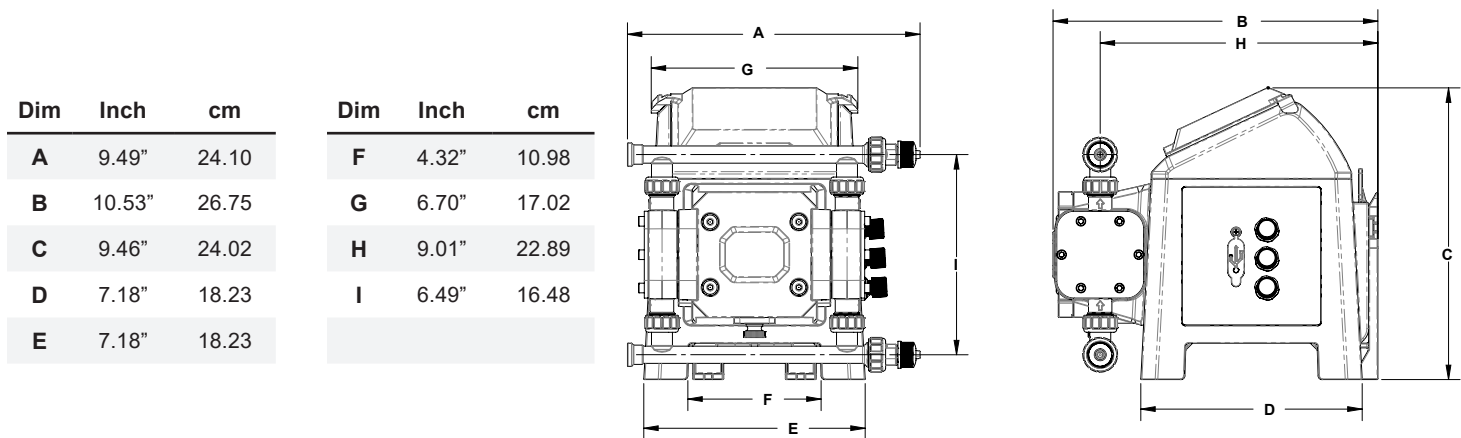
5 Years

Control Methods

Control Methods	Manual Speed Control	4-20mA Input	Remote Start/Stop	4-20mA Output	Alarm Output	FVS	Motor Status Output	Prime Button	Lockout Feature
MD1C	•	•	•	•	•	•	•	•	•
MD1B	•							•	•



Maximum Working Pressure	Up to 180 psig (12.4 bar) * Maximum pressure when using compression fittings: 150 psig (10.3 bar)
Maximum Fluid Temperature	Up to 185 °F (85 °C)
Maximum Ambient Temperature	14 to 115 °F/ -10 to 46 °C
Maximum Viscosity	1,000 Centipoise
Maximum Suction Lift	20 ft. at 0 PSI
Operating Voltage	115V60Hz 1 PH (0.6A max., 80W max.)
	220V50Hz 1 PH (0.3A max., 80W max.)
	230V60Hz 1 PH (0.3A max., 80W max.)
	230V50Hz 1 PH (0.3A max., 80W max.)
	240V50Hz 1 PH (0.3A max., 80W max.)
Power Cord Options	115V/60Hz = NEMA 5/15 (USA)
	230V/60Hz = NEMA 6/15 (USA)
	220V/60Hz = CEE 7/VII (EU)
	240V/60Hz = AS 3112 (Australia/New Zealand)
	230V 50/60Hz = BS 1363/A (United Kingdom)
Signal Connectors	M12 - 5 pin (IP67 rated) ("C" model only)
Motor	Brushless DC, 42W
Duty Cycle	Continuous
Motor Speed Adjustment Range	10,000:1 (0.01% – 100%) Max. rpm = 100 (200 strokes/min)
Maximum Overall Dimensions	9.49"W x 9.46"H x 10.53"D (24.10 W x 24.02 H x 26.75 D cm)
Product Weight	10.7 lb. (4.85 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	20.0 lb. (9.1 Kg)
Enclosure	NEMA 4X, Valox® (PBT)
RoHS Compliant	Yes
Standards	NSF 61, cETLus, CE, BABA Compliant



Non-wetted Components:

Enclosure: Valox® (PBT)

Drive Enclosure: PA12

Control Panel Cover: Polycarbonate

Pump Head Cover: Polycarbonate

Cover Screws: Stainless steel

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 Assembly:

Pump Head : PVDF

Adapter Connections : PVDF

Valve Cartridge : PVDF

Valve Balls : Ceramic

O-Ring Seals : TFE/P or EP

Diaphragm : DiaFlex® or Flex-A-Prene®

Injection/Back-Flow Check Valve:

Body & Insert : PVDF

Check Ball : Ceramic

Spring : Hastelloy C-276

Ball Seat O-Ring : TFE/P or EP

Static Seal O-Ring : TFE/P or EP

Foot Valve / Strainer:

Body & Adapter : PVDF

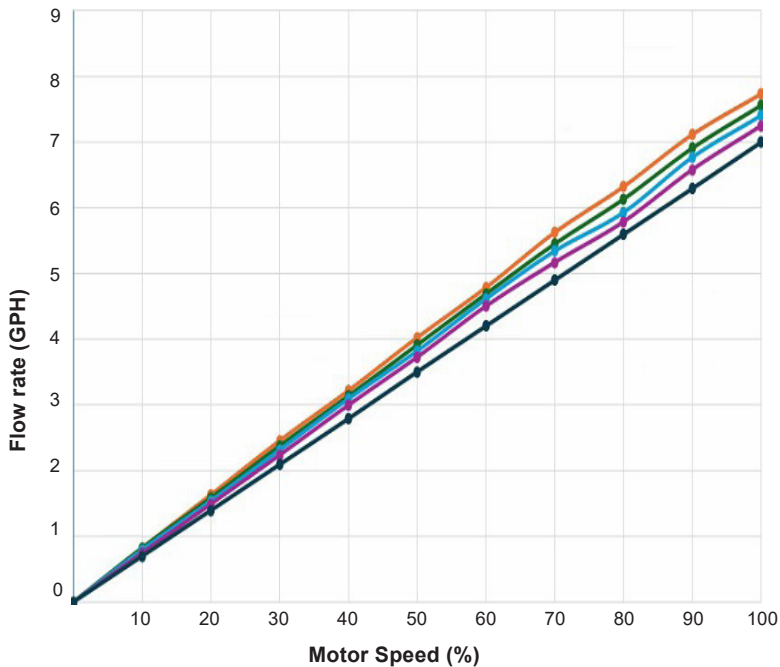
Check Ball : Ceramic

Spring : Hastelloy C-276

O-Ring Seal TFE/P or EP

Filter Screen : PVDF

Performance



30 PSI 60 PSI 90 PSI 120 PSI 150 PSI 180 PSI

Motor Speed %	Flowrate (Gal/hr), Pressure						Flowrate (mL/min), Pressure					
	30 PSI	60 PSI	90 PSI	120 PSI	150 PSI	180 psi	30 PSI	60 PSI	90 PSI	120 PSI	150 PSI	180 PSI
	2.1 Bar	4.2 Bar	6.2 Bar	8.3 Bar	10.3 Bar	12.4 Bar	2.1 Bar	4.2 Bar	6.2 Bar	8.3 Bar	10.3 Bar	12.4 Bar
10	0.82	0.82	0.79	0.74	0.73	0.70	52	52	50	47	46	44
20	1.63	1.59	1.54	1.49	1.46	1.39	103	100	97	94	92	88
30	2.46	2.38	2.31	2.23	2.19	2.09	155	150	146	141	138	132
40	3.22	3.14	3.09	3.00	2.92	2.79	203	198	195	189	184	176
50	4.03	3.92	3.82	3.72	3.60	3.50	254	247	241	235	227	221
60	4.79	4.69	4.61	4.50	4.36	4.20	302	296	291	284	275	265
70	5.63	5.45	5.34	5.17	5.01	4.90	355	344	337	326	316	309
80	6.32	6.13	5.93	5.79	5.66	5.60	399	387	374	365	357	353
90	7.12	6.91	6.77	6.58	6.45	6.29	449	436	427	415	407	397
100	7.73	7.56	7.40	7.24	7.13	7.00	488	477	467	457	450	441

Model Number Matrix

CHEM-FEED® Model Number

MD1

MD1	CHEM-FEED® Diaphragm Metering Pump				
Control					
B	Base = Manual Speed Control (No I/O)				
C	Control = 4-20mA Input, 4-20mA Output, Manual Speed Control, Remote Start/Stop Input, Outputs (TFD, FVS, Motor)				
Diaphragm and O-Rings Material					
V	DiaFlex® Diaphragms and TFE/P O-Rings				
W	Flex-A-Prene® Diaphragms and TFE/P O-Rings				
D	DiaFlex® Diaphragms and EP O-Rings				
E	Flex-A-Prene® Diaphragms and EP O-Rings				
Pump Fittings (Inlet / Outlet)					
B	1/2" ID Barb Straight Fittings				
C	1/2" ID Barb Elbow Fittings				
S	1/4" x 3/8" Compression Straight Fittings (maximum pressure rating is 150 psi (10.3 bar) when using compression fittings)				
T	1/4" x 3/8" Compression Elbow Fittings (maximum pressure rating is 150 psi (10.3 bar) when using compression fittings)				
M	1/2" M/NPT Straight Fittings				
X	1/2" M/NPT Elbow Fittings				
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)				
MD1	B	V	B	4	Sample Model Number

Accessories

 <p>KIT-S07 KIT-S15 KIT-S30</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>KIT-PSM (Lg), KIT-PSS (Sm) WALL MOUNT PUMP SHELF</p>	<p>KIT-C*1TZZ Elbow, 1/4x3/8 tubing KIT-C*1XZZ Elbow, 1/2" MNPT KIT-C*1CZZ Elbow, 1/2" Hose Barb KIT-C*1SZZ Straight, 1/4x3/8 tubing KIT-C*1MZZ Straight, 1/2" MNPT KIT-C*1BZZ Straight, 1/2" Hose Barb * A = Aflas O-rings, E = EP O-rings</p> <p>FITTING KITS 2 fittings, 2 union nuts, 2 O-rings</p>	
<p>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 90010-821 115V Lockable</p> <p>POWER CABLES</p>	 <p>KIT-M12 TWO M12 CABLES - 9.8 ft</p>	 <p>KIT-CQA (Aflas) / KIT-CQE (EP) QUICK CONNECT KIT MD1</p>	<p>Teflon Ball Check Unibody Cartridge Valve Kit (PVDF body, O-rings, PTFE balls) 4 cartridges included. 72000-854 w/Aflas O-rings 72000-855 w/EPDM O-rings</p> <p>PTFE Ball Check Cart. Kit</p>

Visit Accessory Pages in Manual for More Options