

# MC2

## CHEM-FEED® Diaphragm Metering Pump



### Features

- > Built-in leak detection (DFD) senses diaphragm failure
- > Exclusive DiaFlex® Diaphragm guaranteed to last the life of the pump
- > Signal inputs: 4-20mA, Pulse inputs, and Remote start/stop
- > Signal outputs: Relay (3 amp), 4-20mA, Motor Status
- > Heavy duty PVDF pump head and valves are standard
- > Protective LCD snap-on cover (UV, in field wear and tear)



**NEMA 4X**

### Highlights

**Flow range**

.01 - 16.5 GPH  
.05 - 62.5 LPH

**Pressures**

175 PSI  
(12 bar)

**Turndown ratio**

200 : 1

**Exclusive**

Diaphragm Failure Detection (DFD)

**Motor**

Brushed DC

**Warranty**

2 Years

### Control Methods

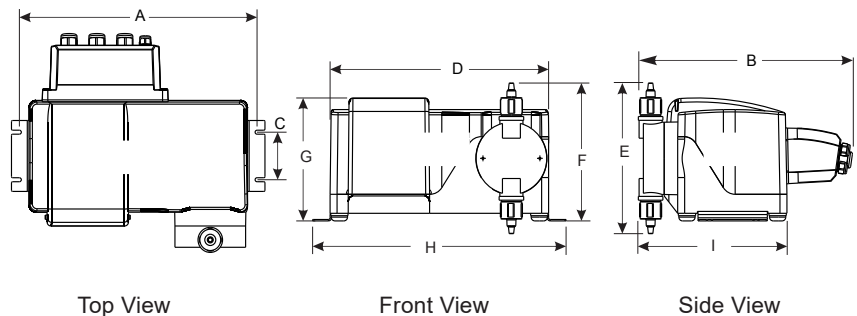
Control Methods	Manual Control	4-20mA Input	Remote Start/Stop	Alarm Output	FVS	Motor Status Output	Frequency Input	Pulse Batching
MC2	•	•	•	•	•	•	•	•



<b>Maximum Working Pressure</b>	175 psig (12 bar)
	<b>NOTE:</b> see individual pump model maximum pressure ratings
<b>Maximum Fluid Temperature</b>	130 °F (54 °C)
<b>Ambient Operating Temperature</b>	14 °F to 110 °F (-10 °C to 46 °C)
<b>Ambient Storage Temperature</b>	-40 °F to 158 °F (-40 °C to 70 °C)
<b>Maximum Viscosity</b>	1,000 Centipoise
<b>Maximum Suction Lift</b>	15 ft. Water, 0 psig (4.5 m, 0 bar)
<b>Operating Voltage (Model Specific)</b>	115VAC/60Hz, 1ph (1.5 Amp Maximum)
	230VAC/60Hz, 1ph (0.7 Amp Maximum)
	220VAC/50Hz, 1ph (1.0 Amp Maximum)
	240VAC/50Hz, 1ph (1.0 Amp Maximum)
<b>Power Cord Options (Model Specific)</b>	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 (UK)
<b>Motor</b>	Brushed DC, 1/8 H.P.
<b>Duty Cycle</b>	Continuous
<b>Motor Speed Adjustment Range</b>	200:1 (0.5% - 100% motor speed) Max. RPM = 166
<b>Motor Speed Adjustment Resolution</b>	0.1% increments
<b>Display</b>	Backlit LCD, UV resistant
<b>Keypad</b>	Positive action tactile switch keypad
<b>Approximate Overall Dimensions</b>	11-3/4" W x 7-3/4" H x 10-3/4" D
<b>Approximate Shipping Weight</b>	24 lb. (10.9 Kg)
<b>Enclosure</b>	NEMA 4X (IP66), Powder coated aluminum
<b>RoHS Compliant</b>	Yes
<b>Standards</b>	NSF 61,cETLus, CE

## Dimensions

Dim	Inch	cm	Dim	Inch	cm
A	14.1"	32.5	F	7.3"	18.4
B	11.5"	29.2	G	6.5"	16.4
C	2.5"	6.4	H	15"	38.1
D	13.1"	29.9	I	8"	20.3
E	7.9"	20.1			



## Non-wetted Components:

**Enclosure:** 413 Aluminum (Polyester powder coated)

**Pump Head Cover:** 316 Stainless Steel

**Cover Screws:** 300 Series Stainless Steel

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

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

**Mounting Brackets and Hardware:** 316 Stainless Steel

## Wetted Components:

Pump Head: PVDF

Adapter Fittings: PVDF

Valve Cartridges: PVDF

Valve Balls: Ceramic (optional EP)

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

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

Body & Adapter: PVDF

Check Ball: Ceramic

## Pump Head Assembly:

**Foot Valve / Strainer:** Spring: Hastelloy C-276

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

Filter Screen: PVDF

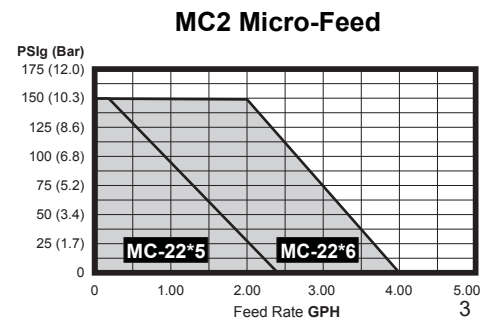
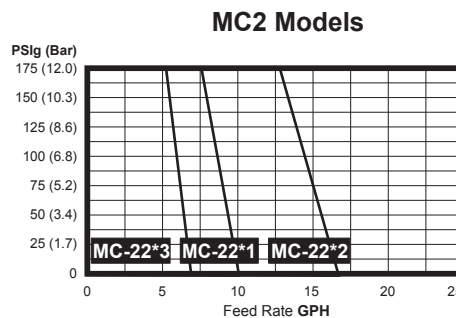
# Output Specifications

CAM Stroke Length	Feed Rate Range at 0 PSig			Max Pressure	Diaphragm Size
	GPH	LPH	mL/MIN	PSI (bar)	
1	.05 - 10	.19 - 38	3.2 - 631	175 (12)	.060" (1.52 mm) stroke with small diaphragm
2	.08 - 16.5	.31 - 62.5	8.25 - 1041	175 (12)	.060" (1.52 mm) stroke with large diaphragm
3	.03 - 6.7	.13 - 25.4	2.1 - 423	175 (12)	.040" (1.02 mm) stroke with small diaphragm
5	.01 - 2.3	.05 - 9.0	0.8 - 150	150 (10)	.040" (1.02 mm) stroke with Micro-Feed
6	.02 - 4.0	.08 - 15.0	1.3 - 250	150 (10)	.060" (1.52 mm) stroke with Micro-Feed

# Performance

## CHEM-FEED® MC2 Diaphragm Metering Pump

**NOTE:** All tests performed after approx. 30 minutes diaphragm break-in period.



## CHEM-FEED® Model Number

<b>MC</b>	CHEM-FEED® Diaphragm metering pump										
<b>Input Voltage / Power Cord</b>											
<b>4</b>	115V / 60Hz, power cord NEMA 5/15 plug (US)					<b>8</b>	240V / 50HZ, power cord AS 3112 plug (AU/New Zealand)				
<b>5</b>	230V / 60Hz, power cord NEMA 6/15 plug (US)					<b>9</b>	230V / 50HZ, power cord BS 1363 plug (UK)				
<b>6</b>	220V / 50HZ, power cord CEE 7/VI plug (EU)										
<b>Stroke Length / Diaphragm size</b>											
<b>1</b>	.060" stroke / small diaphragm   .05–10 GPH   175 PSI										
<b>2</b>	.060" stroke / large diaphragm   .08–16.5 GPH   175 PSI										
<b>3</b>	.040" stroke / small diaphragm   .03–6.7 GPH   175 PSI										
<b>5</b>	.040" stroke / Micro-Feed   .01–2.3 GPH   150 PSI										
<b>6</b>	.060" stroke / Micro-Feed   .02–4.0 GPH   150 PSI										
<b>Elastomer Material (o-rings)</b>											
<b>V</b>	TFE/P										
<b>E</b>	EP (Ethylene Propylene)										
<b>Pump Head Fitting and Injection Fitting / Check Valve Connections</b>											
<b>1</b>	1/2" ID x 3/4" OD tubing pump head										
<b>2</b>	1/4" ID x 3/8" OD Tubing pump head										
<b>3</b>	1/2" Male NPT inlet and outlet, with 1/2" M/NPT injection fitting										
<b>4</b>	1/2" Female NPT inlet and outlet, with 1/2" M/NPT injection fitting										
<b>Miscellaneous Options</b> (leave blank if not used)											
<b>A</b>	Hastelloy C check valve balls, standard injection fittings										
<b>B</b>	Single 1/2" ceramic ball & Hastelloy C spring P/head check valve for viscous fluids										
<b>H</b>	PTFE balls (double ball check valve, injection fitting) low viscosity/density fluids only										
<b>J</b>	PTFE balls (single ball w/Hastelloy spring check valve, injection fitting)										
<b>S</b>	Flex-A-Prene® Diaphragms (Caustic Soda resistant diaphragms)										
<b>MC</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>X</b>	<b>V</b>	<b>1</b>	<b>A</b>	<b>Sample Model Number</b>		

## Accessories

