

# MC3

## CHEM-FEED® Diaphragm Metering Pump



### Features

- > Built-in leak detection (DFD) senses diaphragm failure
- > Patented DiaFlex® offers zero breakdown, reducing maintenance
- > 4-20mA input and 4-20mA output, standard on all models
- > Heavy duty PVDF pump head and valves are standard
- > Protective LCD snap-on cover, (UV, in field wear and tear)



### Highlights

**Flow range**

.13 - 40.6 GPH  
.5 - 154 LPH

**Pressures**

150 PSI  
(10.3 bar)

**Turndown ratio**

200 : 1

**Exclusive**

Diaphragm Failure Detection (DFD)

**Motor**

Brushed DC

**Warranty**

2 Years

### Control Methods

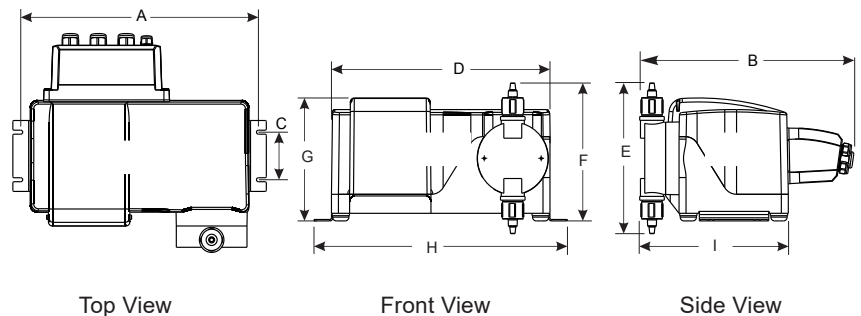
Control Methods	Manual Control	4-20mA Input	Remote Start/Stop	Alarm Output	FVS	Motor Status Output	Frequency Input	Pulse Batching
MC3	•	•	•	•	•	•	•	•



<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 115 °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/VII (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
<b>Motor Speed Adjustment Resolution</b>	0.1% increments
<b>Display</b>	Backlit LCD, UV resistant
<b>Keypad</b>	Five button positive action tactile switch keypad
<b>Approximate Overall Dimensions</b>	13-1/8" W x 9" H x 10-3/4" D
<b>Approximate Shipping Weight</b>	29 lb. (13.1 Kg)
<b>Enclosure</b>	NEMA 4X (IP66), Powder coated aluminum
<b>RoHS Compliant</b>	Yes
<b>Standards</b>	cETLus, CE

## Dimensions

Dim	Inch	cm	Dim	Inch	cm
<b>A</b>	14.1"	35.8	<b>F</b>	7.8"	19.8
<b>B</b>	12"	30.5	<b>G</b>	6.5"	16.4
<b>C</b>	2.5"	6.4	<b>H</b>	15"	38.1
<b>D</b>	13.1"	33.2	<b>I</b>	8"	20.3
<b>E</b>	9"	22.9			



## 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: PVDF, (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

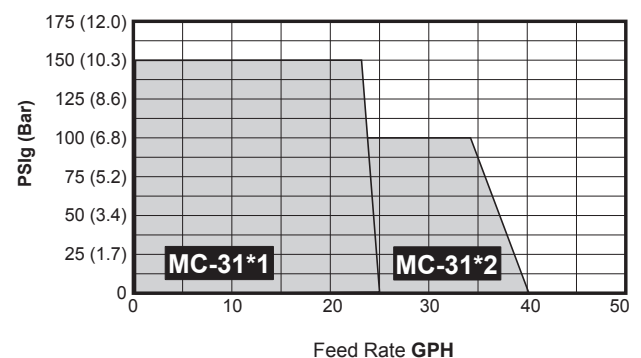
CAM Stroke Length	Feed Rate Range at 0 PSig			Max Pressure	Diaphragm Size
	GPH	LPH	mL/MIN	PSI (bar)	
1	.13 - 26.2	.5 - 99	8.3 - 1650	150 (10.3)	.060" stroke / large diaphragm
2	.20 - 40.6	.77 - 154	12.8 - 2560	100 (6.8)	.100" stroke / large diaphragm

## Performance

### CHEM-FEED® MC3 Diaphragm Metering Pump

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

## MC3 Models



## 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/VII plug (EU)										
<b>Stroke Length / Diaphragm size</b>											
<b>1</b>	.060" stroke / large diaphragm   .13–26.2 GPH   150 PSI										
<b>2</b>	.100" stroke / large diaphragm   .20–40.6 GPH   100 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>3</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>X</b>	<b>V</b>	<b>1</b>	<b>A</b>	<b>Sample Model Number</b>		