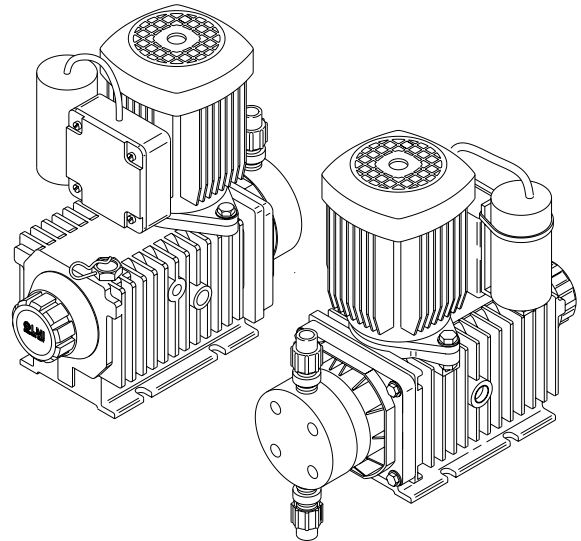


### Motor-Driven Metering Pumps

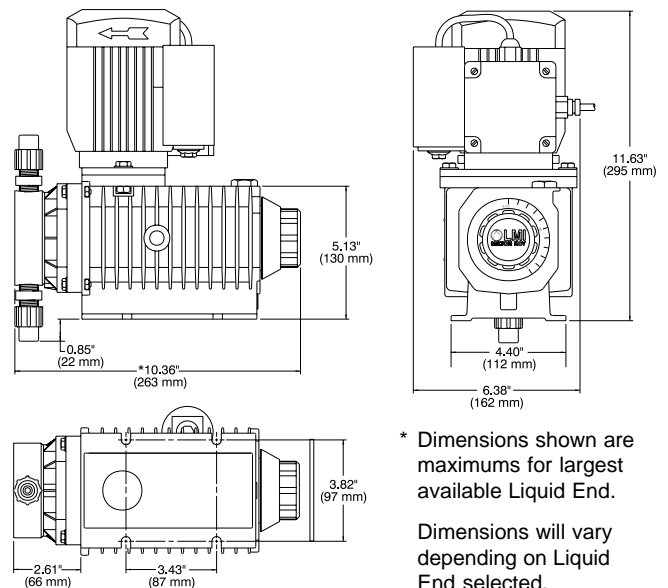
#### Configuration Data

Model **M13** **1** - **12S**

Control & Output Code	
Motor Driven	
Stroke frequency fixed	
Stroke length manually adjustable.	
M13	----- 10 GPH (38 l/h) ... 120 psi (8.3 Bar)
M14	----- 22 GPH (83 l/h) ..... 60 psi (4.1 Bar)
M15	----- 35 GPH (133 l/h) ..... 60 psi (4.1 Bar)
Voltage Code	
1	----- 120 VAC, US Plug
2	----- 240 VAC, US Plug
3	----- 220-240 VAC, DIN Plug
5	----- 240-250 VAC, UK Plug
6	----- 240-250 VAC, AUST/NZ Plug
7	----- 220-240 VAC, SWISS Plug
Liquid End	
See next page for complete liquid end specifications and selection.	



#### Dimensions



\* Dimensions shown are maximums for largest available Liquid End. Dimensions will vary depending on Liquid End selected.

#### Specifications

Series	Strokes Per Minute (Fixed)		Stroke Length (Adjustable) Recommended Minimum	Maximum Current (Amps)		Shipping Weight
	60 Hz	50Hz		115V	230V	
M13	144	120	10%	3.05	1.5	23 lbs (10.5 kg)
M14						
M15						



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## Configuration Data & Materials of Construction

Drive Assembly	Liquid End No.	Size Code	Materials of Construction				Accessory	Tubing & Connections	
			Head & Fittings	Balls	Liquifram™	Seal Ring		Discharge	Suction
M131 ■ -	11	3.0	Acrylic/PVC	Ceramic	Fluorofilm™	Polyprel®		PE .5" O.D.	Vinyl .5" O.D.
	11S	3.0	Acrylic/PVC	Ceramic	Fluorofilm™	Polyprel®	4FV	PE .5" O.D.	Vinyl .5" O.D.
	12	3.0	PVC/PVDF	Ceramic	Fluorofilm™	Polyprel®		PE .5" O.D.	
	12S	3.0	PVC/PVDF	Ceramic	Fluorofilm™	Polyprel®	4FV	PE .5" O.D.	
	15	3.0	Polypropylene	Ceramic	Fluorofilm™	PTFE		PE .5" O.D.	
	15S	3.0	Polypropylene	Ceramic	Fluorofilm™	PTFE	4FV	PE .5" O.D.	
	20HV	3.0	Acrylic /PP	316 S.S.	Fluorofilm™	Hypalon®		PE .5" O.D.	Vinyl .938" O.D.
	20	3.0	Acrylic/PVC	Ceramic	Fluorofilm™	Hypalon®		PE .5" O.D.	Vinyl .5" O.D.
	20S	3.0	Acrylic/PVC	Ceramic	Fluorofilm™	Hypalon®	4FV	PE .5" O.D.	Vinyl .5" O.D.
	24	3.0	PVC	Ceramic	Fluorofilm™	PTFE			Pipe 1/2" NPT M
	25HV	3.0	Polypropylene	316 S.S.	Fluorofilm™	PTFE		PE .5" O.D.	Vinyl .938" O.D.
	25P	3.0	Polypropylene	Ceramic	Fluorofilm™	PTFE			Pipe 1/2" NPT M
	25T	3.0	Polypropylene	Ceramic	Fluorofilm™	PTFE		PE .5" O.D.	
	26	3.0	PVC	Ceramic	Fluorofilm™	Viton®		PE .5" O.D.	
	26S	3.0	PVC	Ceramic	Fluorofilm™	Viton®	4FV	PE .5" O.D.	
27	3.0	316 S.S.	316 S.S.	Fluorofilm™	PTFE			Pipe 1/2" NPT M	
29	3.0	UHMW PE	Ceramic	Fluorofilm™	Hypalon®		PE .5" O.D.		

M141 ■ - M151 ■ -	30	6.0	Acrylic/PVC	Ceramic	PTFE Face	PTFE		PE .5" O.D.	Vinyl .5" O.D.
	30HV	6.0	Acrylic/PVC	316 S.S.	PTFE Face	Hypalon®		PE .5" O.D.	Vinyl .938" O.D.
	34	6.0	PVC	Ceramic	PTFE Face	PTFE			Pipe 1/2" NPT M
	35HV	6.0	Polypropylene	316 S.S.	PTFE Face	PTFE		PE .5" O.D.	Vinyl .938" O.D.
	35P	6.0	Polypropylene	Ceramic	PTFE Face	PTFE			Pipe 1/2" NPT M
	35T	6.0	Polypropylene	Ceramic	PTFE Face	PTFE		PE .5" O.D.	
	36	6.0	PVC	Ceramic	PTFE Face	PTFE		PE .5" O.D.	
	37	6.0	316 S.S.	316 S.S.	PTFE Face	PTFE			Pipe 1/2" NPT M

■ See front page for voltage code specifications.

**4FV** indicates that the pump is equipped with an LMI Four Function Valve. This diaphragm type anti-syphon/pressure relief valve is installed on the pump head. It provides anti-syphon protection and aids in priming, even underpressure.

Fluorofilm™ is a copolymer of PTFE and PFA.  
Polyprel® is an elastomeric PTFE copolymer.

Polyprel is a registered trademark of Liquid Metronics, Inc., Fluorofilm, Liquifram are trademarks of Liquid Metronics, Inc. Hypalon, Viton are registered trademarks of E. I. du Pont de Nemours & Co., Inc.

## Output Information

Series	Gallons per Hour*		Liters per Hour*		mL/cc per Minute*		mL/cc per Stroke		Maximum Injection Pressure
	Min	Max	Min	Max	Min	Max	Min	Max	
M13	1.0	10.0	3.8	38.0	63	631	0.4	4.4	120 psi (8.3 Bar)
M14	2.2	22.0	8.3	83.0	139	1388	1.0	9.6	60 psi (4.1 Bar)
M15	3.5	35.0	13.3	133.0	221	2208	1.5	15.3	60 psi (4.1 Bar)

\* Output is reduced by 17% at 50 Hz.