

Data Sheet

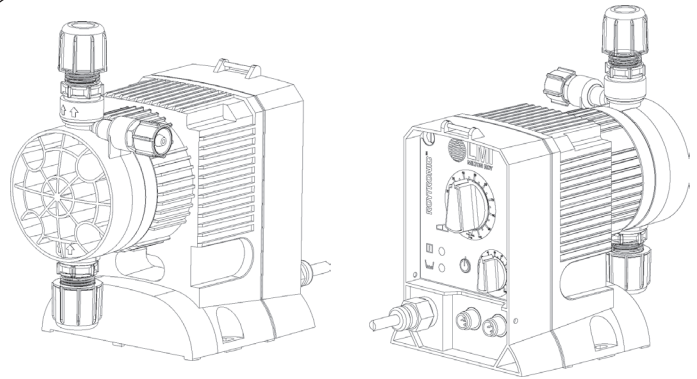
ROYTRONIC® Series A

Electronic Metering Pumps

Model Code Configuration

Drive	Control Code 1 – Dual Manual Control: Speed (stroking frequency) and stroke length manually adjustable 7 – Pulse Input / Dual Manual Control: External control capability through pulse input and low level float switch plus manual control adjustments of control code 1 8 – Analog Input / Dual Manual Control: External control capability through 4-20mA input and low level float switch plus manual control adjustments of control code 1										
	Output Codes with FastPrime™ Liquid End <table border="1"> <thead> <tr> <th>Max Capacity</th> <th>Max Pressure</th> </tr> </thead> <tbody> <tr> <td>1 – 0.25 GPH (1.0 l/h)</td> <td>250 psi (17.2 Bar)</td> </tr> <tr> <td>4 – 0.5 GPH (1.9 l/h)</td> <td>250 psi (17.2 Bar)</td> </tr> <tr> <td>5 – 1.0 GPH (3.8 l/h)</td> <td>110 psi (7.6 Bar)</td> </tr> <tr> <td>6 – 2.0 GPH (7.6 l/h)</td> <td>50 psi (3.4 Bar)</td> </tr> </tbody> </table>	Max Capacity	Max Pressure	1 – 0.25 GPH (1.0 l/h)	250 psi (17.2 Bar)	4 – 0.5 GPH (1.9 l/h)	250 psi (17.2 Bar)	5 – 1.0 GPH (3.8 l/h)	110 psi (7.6 Bar)	6 – 2.0 GPH (7.6 l/h)	50 psi (3.4 Bar)
	Max Capacity	Max Pressure									
	1 – 0.25 GPH (1.0 l/h)	250 psi (17.2 Bar)									
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5 – 1.0 GPH (3.8 l/h)	110 psi (7.6 Bar)										
6 – 2.0 GPH (7.6 l/h)	50 psi (3.4 Bar)										
Voltage Code 1 – 110-120V US Plug 2 – 220-240V US Plug 3 – 220-240V DIN Plug 5 – 220-240V UK Plug 6 – 220-240V Aust/NZ Plug 7 – 220-240V Swiss Plug 8 – 110-120V No Plug											
Liquid End	Liquid End Code See accompanying pages for options										
	Liquifram™ Size Code 1 – 0.2 in ² 2 – 0.4 in ² 3 – 0.8 in ²										
	Material Code See accompanying pages for options										
	Head/Valve Code S – FastPrime™ Head + 4FV N – FastPrime™ Head H – AutoPrime™ Head + 4FV A – AutoPrime™ Head										
	Connection Code I – Inch Tube connections with tubing M – Metric Tube connection without tubing U – Inch Tube connection with Black UV resistant suction/discharge tubing P – NPT only (316 ss Heads)										

Model A 7 5 1 - 8 2 8 S I



Certified to
NSF/ANSI 61

Specifications

Series	Strokes Per Minute (Adjustable) MinMax		Stroke Length (Adjustable) Recommended Minimum	Average Input Power @ Max Speed and Pressure	Max. Shipping Weight
A81, A71, A11	1	120	20%	42 watts	10 lbs (4.75 kg)
A84, A74, A14	1	240	20%		
A85, A75, A15 A86, A76, A16					



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Standard FastPrime™ Liquid End Configuration Data & Materials of Construction

Drive Assembly	Liquid End	Materials of Construction					Accs. Valve	Tubing & Connections
		Size Code	Head/Fittings	Balls	Liquifram™	Seat/O-Ring		
A81 ■	910SI†	1	Acrylic/PVC	Ceramic	Fluorofilm™	PTFE/Polyprel®	4FV	PE 1/4" O.D.
A71 ■	915SI†	1	PP/PP	Ceramic	Fluorofilm™	PTFE	4FV	PE 1/4" O.D.
A11 ■	918SI†	1	PVC/PVC	Ceramic	Fluorofilm™	PTFE/Polyprel®	4FV	PE 1/4" O.D.
A84 ■	919SI†	1	Acrylic/PVDF	PTFE	Fluorofilm™	PTFE/Polyprel®	4FV	PE 1/4" O.D.
A74 ■	917NP	1	316ss/316ss	316ss	Fluorofilm™	316ss/PTFE	—	1/4" NPT
A14 ■	812SI†	1	PVDF/PVDF	Ceramic	Fluorofilm™	PTFE/Polyprel®	4FV	PE 1/4" O.D.
	813SI†	1	PVDF/PVDF	Ceramic	Fluorofilm™	PTFE	4FV	PE 1/4" O.D.
	818SI†	1	PVC/PVC	Ceramic	Fluorofilm™	PTFE/Polyprel®	4FV	PE 1/4" O.D.
	718SI†	1	PVC/PVC	Ceramic	Fluorofilm™	PTFE/Polyprel®	4FV	PE 1/4" O.D.

Drive Assembly	Liquid End	Materials of Construction					Accs. Valve	Tubing & Connections
		Size Code	Head/Fittings	Balls	Liquifram™	Seat/O-Ring		
A85 ■	920SI†	2	Acrylic/PVC	Ceramic	Fluorofilm™	Polyprel®	4FV	PE 3/8" O.D.
A75 ■	925SI†	2	PP/PP	Ceramic	Fluorofilm™	PTFE	4FV	PE 3/8" O.D.
A15 ■	928SI†	2	PVC/PVC	Ceramic	Fluorofilm™	Polyprel®	4FV	PE 3/8" O.D.
	929SI†	2	Acrylic/PVDF	PTFE	Fluorofilm™	Polyprel®	4FV	PE 3/8" O.D.
	927NP	2	316ss/316ss	316ss	Fluorofilm™	316ss/PTFE	—	1/4" NPT
	822SI†	2	PVDF/PVDF	Ceramic	Fluorofilm™	Polyprel®	4FV	PE 3/8" O.D.
	823SI†	2	PVDF/PVDF	Ceramic	Fluorofilm™	PTFE	4FV	PE 3/8" O.D.
	828SI†	2	PVC/PVC	Ceramic	Fluorofilm™	Polyprel®	4FV	PE 3/8" O.D.
	728SI†	2	PVC/PVC	Ceramic	Fluorofilm™	Polyprel®	4FV	PE 3/8" O.D.

Drive Assembly	Liquid End	Materials of Construction					Accs. Valve	Tubing & Connections
		Size Code	Head/Fittings	Balls	Liquifram™	Seat/O-Ring		
A86 ■	930SI†	3	Acrylic/PVC	Ceramic	Fluorofilm™	Polyprel®	4FV	PE 3/8" O.D.
A76 ■	935SI†	3	PP/PP	Ceramic	Fluorofilm™	PTFE	4FV	PE 3/8" O.D.
A16 ■	938SI†	3	PVC/PVC	Ceramic	Fluorofilm™	Polyprel®	4FV	PE 3/8" O.D.
	939SI†	3	Acrylic/PVDF	PTFE	Fluorofilm™	Polyprel®	4FV	PE 3/8" O.D.
	937NP	3	316ss/316ss	316ss	Fluorofilm™	316ss/PTFE	—	1/4" NPT
	832SI†	3	PVDF/PVDF	Ceramic	Fluorofilm™	Polyprel®	4FV	PE 3/8" O.D.
	833SI†	3	PVDF/PVDF	Ceramic	Fluorofilm™	PTFE	4FV	PE 3/8" O.D.
	838SI†	3	PVC/PVC	Ceramic	Fluorofilm™	Polyprel®	4FV	PE 3/8" O.D.
	738SI†	3	PVC/PVC	Ceramic	Fluorofilm™	Polyprel®	4FV	PE 3/8" O.D.

Output Information with FastPrime™ Liquid End

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	
AX1*	0.003	0.25	0.01	1.0	0.157	15.7	0.013	0.13	250 psi (17.2 Bar)
AX4*	0.005	0.5	0.02	1.9	0.315	31.5	0.013	0.13	250 psi (17.2 Bar)
AX5*	0.01	1.0	0.04	3.8	0.630	63.0	0.026	0.26	110 psi (7.6 Bar)
AX6*	0.02	2.0	0.08	7.6	1.260	126.0	0.053	0.53	50 psi (3.4 Bar)

*Minimum output is based on one stroke per minute. Minimum output can be reduced further in external mode.
(Where X = Control Code 0,1,3,7,8).

AutoPrime™ Liquid End Configuration Data & Materials of Construction

Drive Assembly	Liquid End	Size Code	Materials of Construction				Accs. Valve	Tubing & Connections
			Head/Fittings	Balls	Liquifram™	Seat/O-Ring		
A81 ■ A71 ■ A11 ■ A84 ■ A74 ■ A14 ■	910HI†	1	Acrylic/PVC	Ceramic	Fluorofilm™	PTFE/Polyprel®	4FV	PE 1/4" O.D.
	918HI†	1	PVC/PVC	Ceramic	Fluorofilm™	PTFE/Polyprel®	4FV	PE 1/4" O.D.

Drive Assembly	Liquid End	Size Code	Materials of Construction				Accs. Valve	Tubing & Connections
			Head/Fittings	Balls	Liquifram™	Seat/O-Ring		
A85 ■ A75 ■ A15 ■	920HI†	2	Acrylic/PVC	Ceramic	Fluorofilm™	PTFE/Polyprel®	4FV	PE 3/8" O.D.
	928HI†	2	PVC/PVC	Ceramic	Fluorofilm™	PTFE/Polyprel®	4FV	PE 3/8" O.D.

Drive Assembly	Liquid End	Size Code	Materials of Construction				Accs. Valve	Tubing & Connections
			Head/Fittings	Balls	Liquifram™	Seat/O-Ring		
A86 ■ A76 ■ A16 ■	930HI†	3	Acrylic/PVC	Ceramic	Fluorofilm™	PTFE/Polyprel®	4FV	PE 3/8" O.D.
	938HI†	3	PVC/PVC	Ceramic	Fluorofilm™	PTFE/Polyprel®	4FV	PE 3/8" O.D.

Output Information with AutoPrime™ Liquid End

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	
AX1*	0.001	0.13	0.005	0.5	0.082	8.2	0.0007	0.068	150 psi (10.3 Bar)
AX4*	0.003	0.25	0.01	0.9	0.157	15.7	0.0013	0.13	150 psi (10.3 Bar)
AX5*	0.006	0.65	0.02	2.5	0.41	41.0	0.0017	0.17	110 psi (7.6 Bar)
AX6*	0.017	1.7	0.06	6.4	1.07	107.2	0.0045	0.45	50 psi (3.4 Bar)

*Minimum output is based on one stroke per minute. Minimum output can be reduced further in external mode.
(Where X = Control Code 0,1,3,7,8).

AUTOPRIME™ liquid ends have 3 check valves: suction on the bottom; discharge on the front; autopriming bleed on the top. By design, a repeatable portion of the process fluid continuously bleeds through the top check valve to be returned to the chemical supply. The result is the assurance that any gas in the head is automatically relieved thus eliminating air-binding. Depending on application, output may be reduced up to 50%. Variables include supplier piping, stroke length and speed setting. Maximum pressure is 150 psi (10.3 Bar) for AX1, AX4, 110 psi (7.6 Bar) for AX5, 50 psi (3.4 Bar) for AX6 models. (Where X = control codes 0,1,3,7,8).

■ See front page for voltage code specifications.

† To specify black, UV resistant tubing, change 'I' to 'U'. To specify head only and no 4FV, change 'S' to 'N' for FastPrime or change 'H' to 'A' for AutoPrime. To specify 1/2" NPT Male, change 'I' to 'P'.

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 priming, even under pressure.

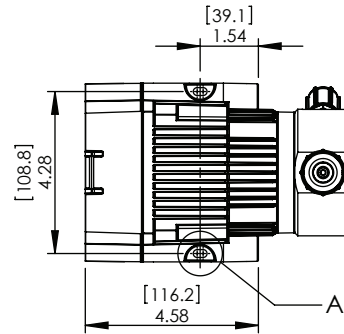
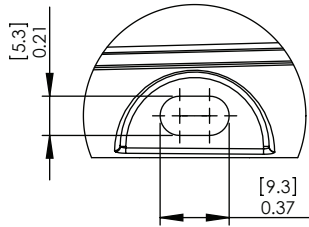
Fluorofilm™ is a copolymer of PTFE and PFA. Polyprel® is an elastomeric PTFE copolymer.

Polyprel is a registered trademark of the Milton Roy Company.

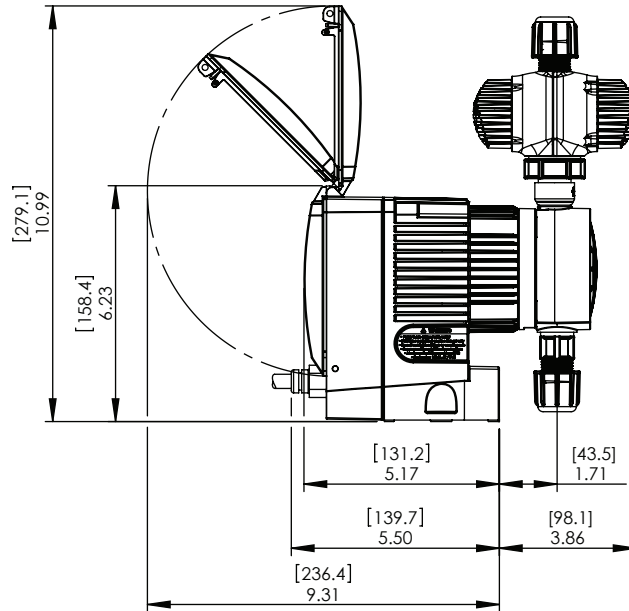
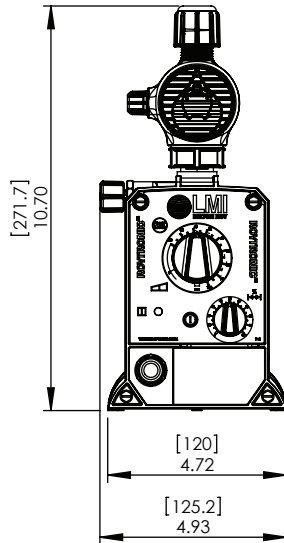
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MOUNTING INFORMATION

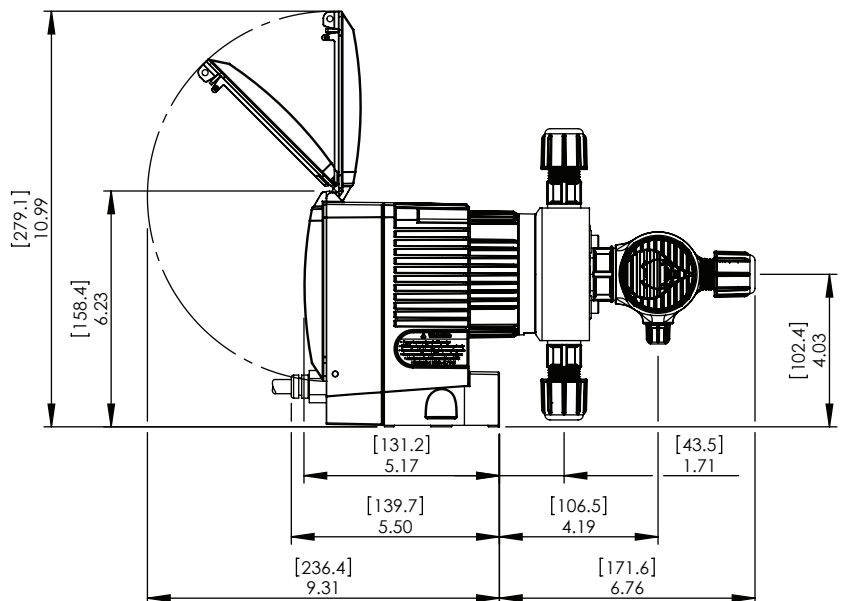
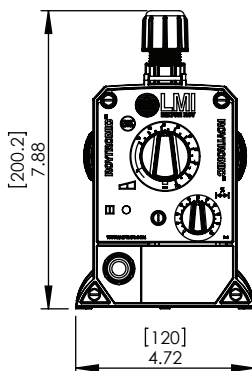
VIEW A



FASTPRIME LIQUID ENDS



AUTOPRIME LIQUID ENDS



NOTE: ALL DIMENSIONS IN INCHES [MM]. DIMENSIONS SHOWN ARE FOR LARGEST LIQUID END. DIMENSIONS WILL VARY DEPENDING ON LIQUID END SELECTED.