

ROYTRONIC® Series A Electronic Metering Pumps

Model Code Configuration

Model A **7 5 1 - 8 2 8 S I**

Drive

Control Code

0 - Single Manual Control:
Speed (stroking frequency) fixed and stroke length manually adjustable

1 - Dual Manual Control:
Speed (stroking frequency) and stroke length manually adjustable

3 - Pulse Input / Single Manual Control:
External control capability through pulse input and low level float switch plus manual control adjustments of control code 0

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 or control code 1

Output Codes

| 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) |

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 in²
2 - 0.4 in²
3 - 0.8 in²

Material Code
See accompanying pages for options

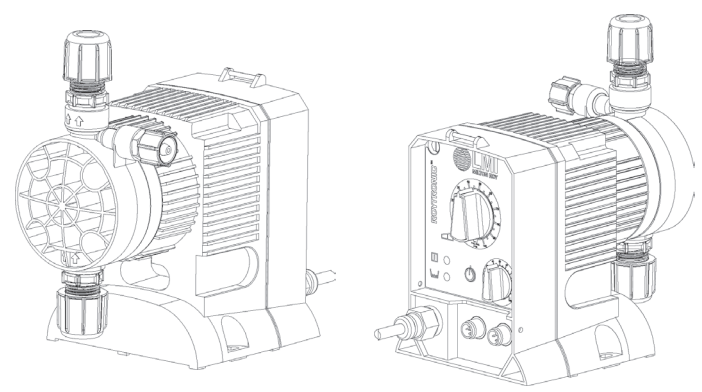
Head/Valve Code

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)

Electronic Metering Pumps



Specifications

| Series | Strokes Per Minute (Adjustable) | | Stroke Length (Adjustable) Recommended Minimum | Average Input Power @ Max Speed and Pressure | Max. Shipping Weight |
|--|---------------------------------|-----|--|--|----------------------|
| | Min | Max | | | |
| A01 | fixed - 120 | | 20% | 42 watts | 10 lbs (4.75 kg) |
| A04, A05, A06 | fixed - 240 | | 20% | | |
| A81, A71, A31, A11 | 1 | 120 | 20% | | |
| A84, A74, A34, A14 A85, A75, A35, A15 A86, A76, A36, A16 | 1 | 240 | 20% | | |



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Standard FastPrime™ 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 ■ | 910SI | 1 | Acrylic/PVC | Ceramic | Flurofilm™ | PTFE/Polyprel® | 4FV | PE 1/4" O.D. |
| A71 ■ | 915SI | 1 | PP/PP | Ceramic | Flurofilm™ | PTFE | 4FV | PE 1/4" O.D. |
| A31 ■ | 918SI | 1 | PVC/PVC | Ceramic | Flurofilm™ | PTFE/Polyprel® | 4FV | PE 1/4" O.D. |
| A11 ■ | 919SI | 1 | Acrylic/PVDF | PTFE | Flurofilm™ | PTFE/Polyprel® | 4FV | PE 1/4" O.D. |
| A01 ■ | 919SI | 1 | Acrylic/PVDF | PTFE | Flurofilm™ | PTFE/Polyprel® | 4FV | PE 1/4" O.D. |
| A84 ■ | 917NP | 1 | 316ss/316ss | 316ss | Flurofilm™ | 316ss/PTFE | — | 1/4" NPT |
| A74 ■ | 812SI | 1 | PVDF/PVDF | Ceramic | Flurofilm™ | PTFE/Polyprel® | 4FV | PE 1/4" O.D. |
| A34 ■ | 812SI | 1 | PVDF/PVDF | Ceramic | Flurofilm™ | PTFE/Polyprel® | 4FV | PE 1/4" O.D. |
| A14 ■ | 813SI | 1 | PVDF/PVDF | Ceramic | Flurofilm™ | PTFE | 4FV | PE 1/4" O.D. |
| A04 ■ | 818SI | 1 | PVC/PVC | Ceramic | Flurofilm™ | PTFE/Polyprel® | 4FV | PE 1/4" O.D. |
| | 718SI | 1 | PVC/PVC | Ceramic | Flurofilm™ | 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 ■ | 920SI | 2 | Acrylic/PVC | Ceramic | Flurofilm™ | Polyprel® | 4FV | PE 3/8" O.D. |
| A75 ■ | 925SI | 2 | PP/PP | Ceramic | Flurofilm™ | PTFE | 4FV | PE 3/8" O.D. |
| A35 ■ | 928SI | 2 | PVC/PVC | Ceramic | Flurofilm™ | Polyprel® | 4FV | PE 3/8" O.D. |
| A15 ■ | 929SI | 2 | Acrylic/PVDF | PTFE | Flurofilm™ | Polyprel® | 4FV | PE 3/8" O.D. |
| A05 ■ | 929SI | 2 | Acrylic/PVDF | PTFE | Flurofilm™ | Polyprel® | 4FV | PE 3/8" O.D. |
| | 927NP | 2 | 316ss/316ss | 316ss | Flurofilm™ | 316ss/PTFE | — | 1/4" NPT |
| | 822SI | 2 | PVDF/PVDF | Ceramic | Flurofilm™ | Polyprel® | 4FV | PE 3/8" O.D. |
| | 823SI | 2 | PVDF/PVDF | Ceramic | Flurofilm™ | PTFE | 4FV | PE 3/8" O.D. |
| | 828SI | 2 | PVC/PVC | Ceramic | Flurofilm™ | Polyprel® | 4FV | PE 3/8" O.D. |
| | 728SI | 2 | PVC/PVC | Ceramic | Flurofilm™ | 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 ■ | 930SI | 3 | Acrylic/PVC | Ceramic | Flurofilm™ | Polyprel® | 4FV | PE 3/8" O.D. |
| A76 ■ | 935SI | 3 | PP/PP | Ceramic | Flurofilm™ | PTFE | 4FV | PE 3/8" O.D. |
| A36 ■ | 938SI | 3 | PVC/PVC | Ceramic | Flurofilm™ | Polyprel® | 4FV | PE 3/8" O.D. |
| A16 ■ | 939SI | 3 | Acrylic/PVDF | PTFE | Flurofilm™ | Polyprel® | 4FV | PE 3/8" O.D. |
| A06 ■ | 939SI | 3 | Acrylic/PVDF | PTFE | Flurofilm™ | Polyprel® | 4FV | PE 3/8" O.D. |
| | 937NP | 3 | 316ss/316ss | 316ss | Flurofilm™ | 316ss/PTFE | — | 1/4" NPT |
| | 832SI | 3 | PVDF/PVDF | Ceramic | Flurofilm™ | Polyprel® | 4FV | PE 3/8" O.D. |
| | 833SI | 3 | PVDF/PVDF | Ceramic | Flurofilm™ | PTFE | 4FV | PE 3/8" O.D. |
| | 838SI | 3 | PVC/PVC | Ceramic | Flurofilm™ | Polyprel® | 4FV | PE 3/8" O.D. |
| | 738SI | 3 | PVC/PVC | Ceramic | Flurofilm™ | Polyprel® | 4FV | PE 3/8" O.D. |

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 | |
| AX1* | 0.003 | 0.25 | 0.01 | 1.0 | 1.57 | 15.7 | .013 | .13 | 250 psi (17.2 Bar) |
| AX4* | 0.005 | 0.5 | 0.02 | 1.9 | 3.15 | 31.5 | .013 | .13 | 250 psi (17.2 Bar) |
| AX5* | 0.01 | 1.0 | 0.04 | 3.8 | 6.30 | 63.0 | .026 | .26 | 110 psi (7.6 Bar) |
| AX6* | 0.02 | 2.0 | 0.08 | 7.6 | 12.60 | 126.0 | .053 | .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 ■ A31 ■ A11 ■ A01 ■ A84 ■ A74 ■ A34 ■ A14 ■ A04 ■ | 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 ■ A35 ■ A15 ■ A05 ■ | 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 ■ A36 ■ A16 ■ A06 ■ | 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. |

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.

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.

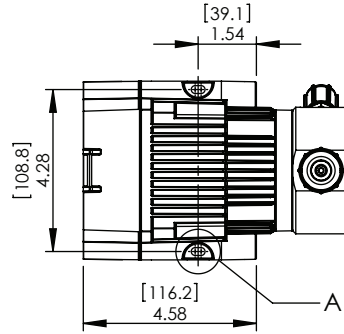
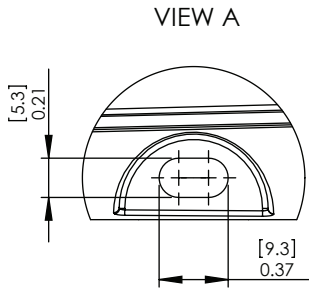
Fluorofilm™ is a copolymer of PTFE and PFA.

Polyprel® is an elastomeric PTFE copolymer.

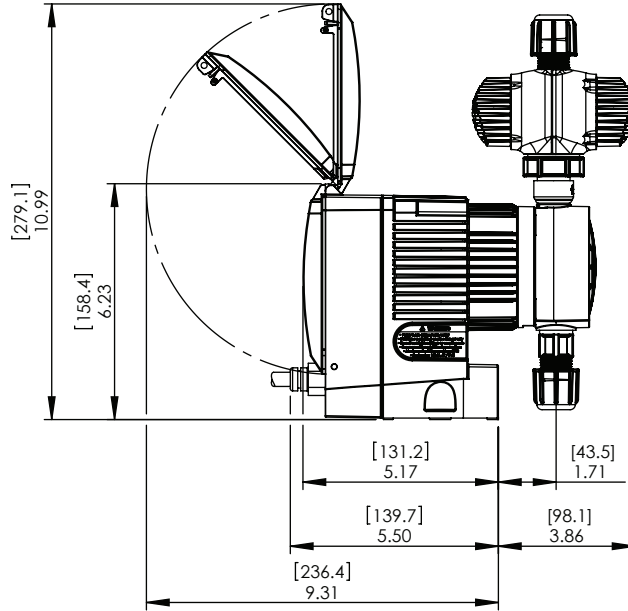
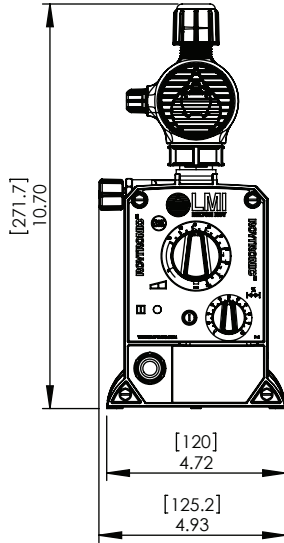
Polyprel is a registered trademark of the Milton Roy Company.

Fluorofilm and Liquifram are trademarks of the Milton Roy Company.

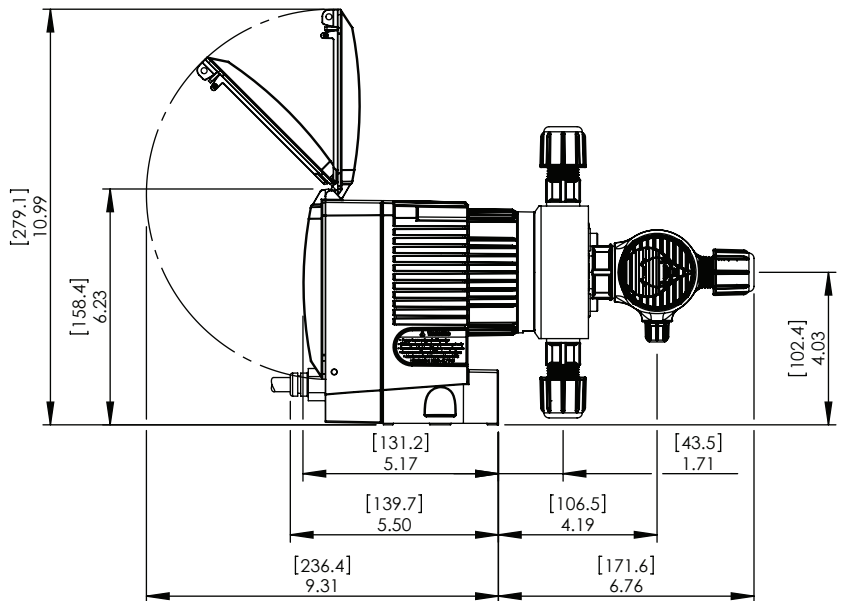
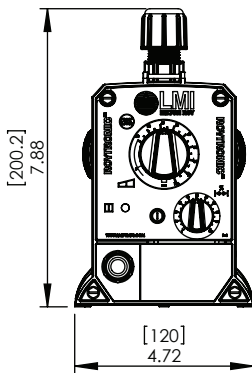
MOUNTING INFORMATION



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.