

### Configuration Data

Model **A94** **1** - **358SI**

#### Control & Output Mode

##### Manual Control

Speed (stroking frequency) and stroke length manually adjustable.

A14	-----	0.58	GPH	(2.2	l/h)	---	250	psi	(17.3	Bar)
A15	-----	1.00	GPH	(3.8	l/h)	---	110	psi	(7.6	Bar)
A16	-----	2.00	GPH	(7.6	l/h)	---	50	psi	(3.5	Bar)
A17	-----	0.42	GPH	(1.6	l/h)	---	140	psi	(9.7	Bar)
A18	-----	0.75	GPH	(2.8	l/h)	---	80	psi	(5.5	Bar)

##### Instrument Responsive / Manual Control

Manual adjustment features of Series A1 plus switch conversion to external control for automatic systems.

A74	-----	0.58	GPH	(2.2	l/h)	---	250	psi	(17.3	Bar)
A75	-----	1.00	GPH	(3.8	l/h)	---	110	psi	(7.6	Bar)
A76	-----	2.00	GPH	(7.6	l/h)	---	50	psi	(3.5	Bar)
A77	-----	0.42	GPH	(1.6	l/h)	---	140	psi	(9.7	Bar)
A78	-----	0.75	GPH	(2.8	l/h)	---	80	psi	(5.5	Bar)

##### Instrument Responsive / Microprocessor

External 4-20mA or pulse ÷ or x direct. Manual stroke control.

A94	-----	0.58	GPH	(2.2	l/h)	---	250	psi	(17.3	Bar)
A95	-----	1.00	GPH	(3.8	l/h)	---	110	psi	(7.6	Bar)
A96	-----	2.00	GPH	(7.6	l/h)	---	50	psi	(3.5	Bar)
A97	-----	0.42	GPH	(1.6	l/h)	---	140	psi	(9.7	Bar)

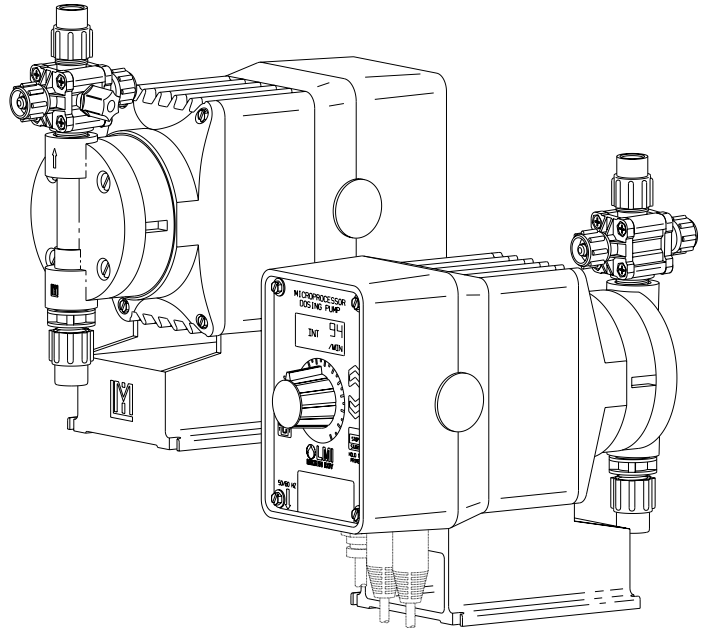
#### Voltage Code

- 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

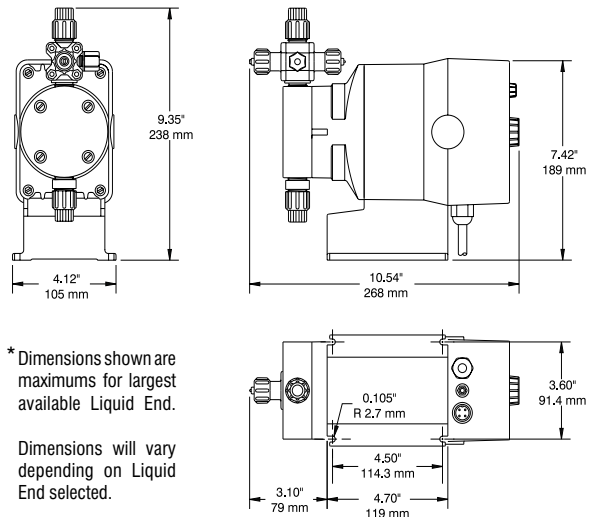
#### Liquid End

See next page for complete liquid end specifications and selection.

### Electronic Metering Pumps



### Dimensions



### Specifications

Series	Strokes Per Minute (Adjustable)		Stroke Length (Adjustable) Recommended Minimum	Average Input Power @ Max Speed	Shipping Weight
	Min	Max			
A14, A74, A94* A15, A75, A95* A16, A76, A96*	1	100	20%	22 watts	10 lbs (4.55 kg)
A17, A77, A97* A18, A78	1	100	30%		

\*Series 9 pumps may be programmed for strokes per hour for lower outputs.



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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™	Check Valve		Discharge	Suction
A97 - A94 - A77 - A74 - A17 - A14 -	458SI†	0.5	PVC / PVC	Ceramic	Fluorofilm™	PVDF / Polyprel®	4FV	PE .250" O.D.	
	450FI	0.5	Acrylic / PVC	PTFE	Fluorofilm™	PVDF / Polyprel®	4FV	PE .250" O.D.	
	450SI†	0.5	Acrylic / PVC	Ceramic	Fluorofilm™	PVDF / Polyprel®	4FV	PE .250" O.D.	
	358SI†	0.5	PVC / PVC	Ceramic	Fluorofilm™	PVDF / Polyprel®	4FV	PE .250" O.D.	
	353SI†	0.5	PVDF / PVDF	Ceramic	Fluorofilm™	PVDF / PTFE	4FV	PE .250" O.D.	
	352SI†	0.5	PVDF / PVDF	Ceramic	Fluorofilm™	PVDF / Polyprel®	4FV	PE .250" O.D.	
	155HV	0.5	Polypropylene	316 S.S.	Fluorofilm™	PTFE		PE .5" O.D. Vinyl .938" O.D.	
	155S**	0.5	Polypropylene	Ceramic	Fluorofilm™	PTFE	4FV	PE .250" O.D.	
156HV	0.5	Acrylic / PP	316 S.S.	Fluorofilm™	Hypalon®		PE .5" O.D. Vinyl .938" O.D.		
257	0.5	316 S.S.	316 S.S.	Fluorofilm™	316 S.S.		Pipe 1/4" NPT M		

A95 - A78 - A75 - A18 - A15 -	498SI†	0.9	PVC / PVC	Ceramic	Fluorofilm™	PVDF / Polyprel®	4FV	PE .375" O.D.
	490SI†	0.9	Acrylic / PVC	Ceramic	Fluorofilm™	PVDF / Polyprel®	4FV	PE .375" O.D.
	490FI	0.9	Acrylic / PVC	PTFE	Fluorofilm™	PVDF / Polyprel®	4FV	PE .375" O.D.
	398SI†	0.9	PVC / PVC	Ceramic	Fluorofilm™	PVDF / Polyprel®	4FV	PE .375" O.D.
	392SI†	0.9	PVDF / PVDF	Ceramic	Fluorofilm™	PVDF / Polyprel®	4FV	PE .375" O.D.
	393SI†	0.9	PVDF / PVDF	Ceramic	Fluorofilm™	PVDF / PTFE	4FV	PE .375" O.D.
	85HV	0.9	Polypropylene	316 S.S.	Fluorofilm™	PTFE		PE .5" O.D. Vinyl .938" O.D.
	86HV	0.9	Acrylic / PP	316 S.S.	Fluorofilm™	Hypalon®		PE .5" O.D. Vinyl .938" O.D.
	89	0.9	UHMWPE	Ceramic	Hypalon®	Hypalon®		PE .5" O.D. Vinyl .5" O.D.
	95S**	0.9	Polypropylene	Ceramic	Fluorofilm™	PTFE	4FV	PE .375" O.D.
297	0.9	316 S.S.	316 S.S.	Fluorofilm™	316 S.S.		Pipe 1/4" NPT M	

A96 - A76 - A16 -	468SI†	1.8	PVC / PVC	Ceramic	Fluorofilm™	PVDF / Polyprel®	4FV	PE .375" O.D.
	460SI†	1.8	Acrylic / PVC	Ceramic	Fluorofilm™	PVDF / Polyprel®	4FV	PE .375" O.D.
	460FI	1.8	Acrylic / PVC	PTFE	Fluorofilm™	PVDF / Polyprel®	4FV	PE .375" O.D.
	368SI†	1.8	PVC / PVC	Ceramic	Fluorofilm™	PVDF / Polyprel®	4FV	PE .375" O.D.
	362SI†	1.8	PVDF / PVDF	Ceramic	Fluorofilm™	PVDF / Polyprel®	4FV	PE .375" O.D.
	363SI†	1.8	PVDF / PVDF	Ceramic	Fluorofilm™	PVDF / PTFE	4FV	PE .375" O.D.
	65S**	1.8	Polypropylene	Ceramic	Fluorofilm™	PTFE	4FV	PE .375" O.D.
	75HV	1.8	Polypropylene	316 S.S.	Fluorofilm™	PTFE		PE .5" O.D. Vinyl .938" O.D.
	76HV	1.8	Acrylic / PP	316 S.S.	Fluorofilm™	Hypalon®		PE .5" O.D. Vinyl .938" O.D.
	79	1.8	UHMWPE	Ceramic	Hypalon®	Hypalon®		PE .5" O.D. Vinyl .5" O.D.
	277	1.8	316 S.S.	316 S.S.	Fluorofilm™	316 S.S.		Pipe 1/4" NPT M

See front page for voltage code specifications.

\*\* These Liquid Ends are available without a 4-FV.

† To specify 1/4" NPT male, change 'I' to 'P'. To specify black, UV resistant tubing, change 'I' to 'U'. To specify Bleed 4FV, change 'S' to 'B'. To specify 3FV, change 'S' to 'T'.

**3FV** indicates that the pump is equipped with an LMI Three Function Valve (pressure relief, priming aid, line drain).

**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 under pressure.

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

Polyprel is a registered trademark of Liquid Metronics Incorporated. Fluorofilm and Liquifram are trademarks of Liquid Metronics Incorporated. Hypalon is a registered trademark 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	
A94*, A74*, A14	0.001	0.58	0.004	2.2	0.07	37	0.07	0.37	250 psi (17.3 Bar)
A95*, A75*, A15	0.002	1.00	0.008	3.8	0.13	63	0.13	0.63	110 psi (7.6 Bar)
A96*, A76*, A16	0.004	2.00	0.015	7.6	0.25	126	0.25	1.26	50 psi (3.5 Bar)
A97*, A77*, A17	0.001	0.42	0.005	1.6	0.08	26	0.08	0.26	140 psi (9.7 Bar)
A78*, A18	0.002	0.75	0.009	2.8	0.14	47	0.14	0.47	80 psi (5.5 Bar)

\* Minimum output is based on one stroke per minute. Minimum output can be reduced further in external mode. Series A9 pumps may be programmed for strokes per hour for lower outputs.