

# AD Series

## Chemical Metering Pump

### Designed to Meet Your Most Challenging Needs

The LMI EXCEL® AD Series Pump is designed specifically for commercial and industrial applications and gives you improved electromagnetics to meet your specific flow and pressure requirements. Equipped with more versatile chemical injection (up to 1000:1 turndown capacity), the EXCEL® AD pump allows you to take control of your chemical feed application. Included is an advanced design fitting system for secure, leak-proof tubing or NPT connections and each pump comes standard with FASTPRIME™ liquid ends.

With an easy-to-read LCD user interface, external pacing, alarms and pulse/4-20 mA input and output capability – the EXCEL® AD pump has the power and flexibility you need to accurately perform in the harshest industrial or municipal environments.



### Performance Specifications

#### Control Codes

Key Features	AD2	AD8	AD9
Stroke length manually adjustable	✓	✓	✓
Stroke frequency manually adjustable	✓	✓	✓
Low level indication	✓	✓	✓
Display of calculated flow rate	✓	✓	✓
Pulse or 4/20 mA signal input controls frequency		✓	✓
Pulse multiply/divide functions		✓	✓
24 V output for remote device		✓	✓
Dual low-level float switch input		✓	✓
Remote on/off signal input			✓
Outputs include: 4-20mA, pulse, Alarm			✓
Remote internal/external mode input			✓
Remote alarm transfer			✓
7 Day Programmable Timer			✓

Output Code	Max Output GPH	Max Output LPH	Max Pressure PSI	Max Pressure Bar
<b>Excel™ AD with FastPrime™</b>				
1	0.21	0.8	250	17.2
4	0.50	1.9	250	17.2
5	1.0	3.8	110	7.6
6	2.0	7.6	50	3.4
<b>Excel™ AD with AutoPrime™</b>				
1	0.15	0.6	250	17.2
4	0.33	1.2	250	17.2
5	0.80	3.0	110	7.6
6	1.80	6.8	50	3.4

### Features & Benefits

- Adjustable stroke frequency with the flexibility of up to 1000:1 turndown ratio
- Universal power supply
- Double-ball check valves for improved accuracy and reliability
- FastPrime liquid ends allow you to efficiently prime the pump without depressurizing the discharge line
- Digital and analog outputs provide convenient user control interface with remote systems
- Easy-to-read LCD interface gives you a consistent clear view of content
- A selection of options allows you to customize pump performance to your application
- Push button controls
- Durable and lockable clear cover that protects against chemical and tampering

- Theoretical flow rate display
- NEMA 4X/IP-65 enclosure
- Industrial grade IP-68 external signal/equipment interface
- 3-year Warranty
- UL, NSF 61, NSF 372, CE Certifications

#### Additional features on the AD9 Series Include:

- Timed Event Mode - 7 Day programmable timer with ability to set duration and speed for each event
- Selectable alarms
- Backlit graphical display
- Separate pulse/4-20 mA input and output connections
- Internal/External mode indicated with a wired output





## OUTPUT CODE 1

### ADx1

#### Drive End

#### Control

AD21 Dual Manual Control (dual power supply)

AD81 Pulse/Analog Input w/ Dual Manual Control (universal power supply)

AD91 Pulse/Analog Input w/ Dual Manual Control - Advanced Features (universal power supply)

Power Code	Voltage		Frequency		Plug			
1	Dual or Universal		50-60 HZ		110 - 120V US Plug			
2	Dual or Universal		50-60 HZ		220 - 240V US Plug			
3	Dual or Universal		50-60 HZ		220 - 240V DIN Plug			
5	Dual or Universal		50-60 HZ		220 - 240V UK Plug			
6	Dual or Universal		50-60 HZ		220 - 240V Aust/NZ Plug			

Liquid End	Head	Fittings	Balls	Function Valve	Connections	Seat / O-Ring	RPM Kit
<b>FastPrime™ Machined</b>							
910NI	Acrylic	PVC	Ceramic	-	PE ¼" O.D.	PTFE/Polyprel®	RPM-812
910SI	Acrylic	PVC	Ceramic	FV	PE ¼" O.D.	PTFE/Polyprel®	RPM-812
915NI	PP	PP	Ceramic	-	PE ¼" O.D.	PTFE	RPM-813
915SI	PP	PP	Ceramic	FV	PE ¼" O.D.	PTFE	RPM-813
918NI	PVC	PVC	Ceramic	-	PE ¼" O.D.	PTFE/Polyprel®	RPM-812
918SI	PVC	PVC	Ceramic	FV	PE ¼" O.D.	PTFE/Polyprel®	RPM-812
919NI	Acrylic	PVDF	PTFE	-	PE ¼" O.D.	Polyprel®	RPM-919
919SI	Acrylic	PVDF	PTFE	FV	PE ¼" O.D.	Polyprel®	RPM-919
917NP	316SS	316SS	316SS	-	¼" NPT	316SS/PTFE	RPM-917
<b>FastPrime™ Molded</b>							
812NI	PVDF	PVDF	Ceramic	-	PE ¼" O.D.	PTFE/Polyprel®	RPM-812
812SI	PVDF	PVDF	Ceramic	FV	PE ¼" O.D.	PTFE/Polyprel®	RPM-812
813NI	PVDF	PVDF	Ceramic	-	PE ¼" O.D.	PTFE	RPM-813
813SI	PVDF	PVDF	Ceramic	FV	PE ¼" O.D.	PTFE	RPM-813
818NI	PVC	PVC	Ceramic	-	PE ¼" O.D.	PTFE/Polyprel®	RPM-812
818SI	PVC	PVC	Ceramic	FV	PE ¼" O.D.	PTFE/Polyprel®	RPM-812
<b>AutoPrime™ De-gas</b>							
A10AI	Acrylic	PVC	Ceramic	-	PE ¼" O.D.	PTFE/Polyprel®	RPM-A10A
A10HI	Acrylic	PVC	Ceramic	FV	PE ¼" O.D.	PTFE/Polyprel®	RPM-A10A
A18AI	PVC	PVC	Ceramic	-	PE ¼" O.D.	PTFE/Polyprel®	RPM-A10A
A18HI	PVC	PVC	Ceramic	FV	PE ¼" O.D.	PTFE/Polyprel®	RPM-A10A



## OUTPUT CODE 4

### ADx4

#### Drive End

#### Control

AD24 Dual Manual Control (dual power supply)

AD84 Pulse/Analog Input w/ Dual Manual Control (universal power supply)

AD94 Pulse/Analog Input w/ Dual Manual Control - Advanced Features (universal power supply)

Power Code	Voltage		Frequency		Plug		
1	Dual or Universal		50-60 HZ		110 - 120V US Plug		
2	Dual or Universal		50-60 HZ		220 - 240V US Plug		
3	Dual or Universal		50-60 HZ		220 - 240V DIN Plug		
5	Dual or Universal		50-60 HZ		220 - 240V UK Plug		
6	Dual or Universal		50-60 HZ		220 - 240V Aust/NZ Plug		

Liquid End	Head	Fittings	Balls	Valve	Connections Suction/Discharge	Seat / O-Ring	RPM Kit
<b>FastPrime™ Machined</b>							
920NI	Acrylic	PVC	Ceramic	-	PE ¼" O.D.	PTFE/Polyprel®	RPM-822
920SI	Acrylic	PVC	Ceramic	FV	PE ¼" O.D.	PTFE/Polyprel®	RPM-822
925NI	PP	PP	Ceramic	-	PE ¼" O.D.	PTFE	RPM-823
925SI	PP	PP	Ceramic	FV	PE ¼" O.D.	PTFE	RPM-823
928NI	PVC	PVC	Ceramic	-	PE ¼" O.D.	PTFE/Polyprel®	RPM-822
928SI	PVC	PVC	Ceramic	FV	PE ¼" O.D.	PTFE/Polyprel®	RPM-822
929NI	Acrylic	PVDF	PTFE	-	PE ¼" O.D.	Polyprel®	RPM-929
929SI	Acrylic	PVDF	PTFE	FV	PE ¼" O.D.	Polyprel®	RPM-929
927NP	316SS	316SS	316SS	-	¼" NPT	316SS/PTFE	RPM-927
<b>FastPrime™ Molded</b>							
822NI	PVDF	PVDF	Ceramic	-	PE ¼" O.D.	PTFE/Polyprel®	RPM-822
822SI	PVDF	PVDF	Ceramic	FV	PE ¼" O.D.	PTFE/Polyprel®	RPM-822
823NI	PVDF	PVDF	Ceramic	-	PE ¼" O.D.	PTFE	RPM-823
823SI	PVDF	PVDF	Ceramic	FV	PE ¼" O.D.	PTFE	RPM-823
828NI	PVC	PVC	Ceramic	-	PE ¼" O.D.	PTFE/Polyprel®	RPM-822
828SI	PVC	PVC	Ceramic	FV	PE ¼" O.D.	PTFE/Polyprel®	RPM-822
<b>AutoPrime™ De-gas</b>							
A20AI	Acrylic	PVC	Ceramic	-	PE ¼" O.D.	PTFE/Polyprel®	RPM-A20A
A20HI	Acrylic	PVC	Ceramic	FV	PE ¼" O.D.	PTFE/Polyprel®	RPM-A20A
A28AI	PVC	PVC	Ceramic	-	PE ¼" O.D.	PTFE/Polyprel®	RPM-A20A
A28HI	PVC	PVC	Ceramic	FV	PE ¼" O.D.	PTFE/Polyprel®	RPM-A20A
<b>High Viscosity</b>							
624VI	PP	PP	316SS	-	PE ½" OD / Vinyl 0.938" OD	PTFE	RPM-624
624PI	PP	PP	316SS	-	PE ½" OD / Vinyl 0.938" OD	PTFE	RPM-624
626VI	Acrylic	PP	316SS	-	PE ½" OD / Vinyl 0.938" OD	PTFE	RPM-626



## OUTPUT CODE 5

### ADx5

#### Drive End

#### Control

AD25 Dual Manual Control (dual power supply)

AD85 Pulse/Analog Input w/ Dual Manual Control (universal power supply)

AD95 Pulse/Analog Input w/ Dual Manual Control - Advanced Features (universal power supply)

Power Code	Voltage		Frequency		Plug			
1	Dual or Universal		50-60 HZ		110 - 120V US Plug			
2	Dual or Universal		50-60 HZ		220 - 240V US Plug			
3	Dual or Universal		50-60 HZ		220 - 240V DIN Plug			
5	Dual or Universal		50-60 HZ		220 - 240V UK Plug			
6	Dual or Universal		50-60 HZ		220 - 240V Aust/NZ Plug			

Liquid End	Head	Fittings	Balls	Valve	Connections Suction/Discharge	Seat / O-Ring	RPM Kit
<b>FastPrime™ Machined</b>							
930NI	Acrylic	PVC	Ceramic	-	PE 3/8" O.D.	PTFE/Polyprel®	RPM-832
930SI	Acrylic	PVC	Ceramic	FV	PE 3/8" O.D.	PTFE/Polyprel®	RPM-832
935NI	PP	PP	Ceramic	-	PE 3/8" O.D.	PTFE	RPM-833
935SI	PP	PP	Ceramic	FV	PE 3/8" O.D.	PTFE	RPM-833
938NI	PVC	PVC	Ceramic	-	PE 3/8" O.D.	PTFE/Polyprel®	RPM-832
938SI	PVC	PVC	Ceramic	FV	PE 3/8" O.D.	PTFE/Polyprel®	RPM-832
939NI	Acrylic	PVDF	PTFE	-	PE 3/8" O.D.	Polyprel®	RPM-939
939SI	Acrylic	PVDF	PTFE	FV	PE 3/8" O.D.	Polyprel®	RPM-939
937NP	316SS	316SS	316SS	-	1/4" NPT	316SS/PTFE	RPM-937
<b>FastPrime™ Molded</b>							
832NI	PVDF	PVDF	Ceramic	-	PE 3/8" O.D.	PTFE/Polyprel®	RPM-832
832SI	PVDF	PVDF	Ceramic	FV	PE 3/8" O.D.	PTFE/Polyprel®	RPM-832
833NI	PVDF	PVDF	Ceramic	-	PE 3/8" O.D.	PTFE	RPM-833
833SI	PVDF	PVDF	Ceramic	FV	PE 3/8" O.D.	PTFE	RPM-833
838NI	PVC	PVC	Ceramic	-	PE 3/8" O.D.	PTFE/Polyprel®	RPM-832
838SI	PVC	PVC	Ceramic	FV	PE 3/8" O.D.	PTFE/Polyprel®	RPM-832
<b>AutoPrime™ De-gas</b>							
A30AI	Acrylic	PVC	Ceramic	-	PE 3/8" O.D.	PTFE/Polyprel®	RPM-A30A
A30HI	Acrylic	PVC	Ceramic	FV	PE 3/8" O.D.	PTFE/Polyprel®	RPM-A30A
A38AI	PVC	PVC	Ceramic	-	PE 3/8" O.D.	PTFE/Polyprel®	RPM-A30A
A38HI	PVC	PVC	Ceramic	FV	PE 3/8" O.D.	PTFE/Polyprel®	RPM-A30A
<b>High Viscosity</b>							
634VI	PP	PP	316SS	-	PE 1/2" OD / Vinyl 0.938" OD	PTFE	RPM-634
634PI	PP	PP	316SS	-	PE 1/2" OD / Vinyl 0.938" OD	PTFE	RPM-634
636VI	Acrylic	PP	316SS	-	PE 1/2" OD / Vinyl 0.938" OD	PTFE	RPM-636





## OUTPUT CODE 6

### ADx6

#### Drive End

#### Control

AD26 Dual Manual Control (dual power supply)

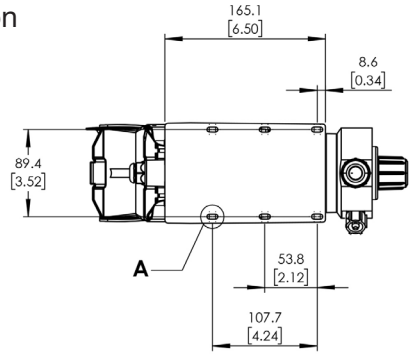
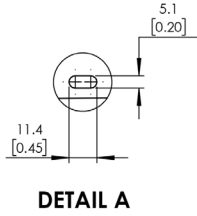
AD86 Pulse/Analog Input w/ Dual Manual Control (universal power supply)

AD96 Pulse/Analog Input w/ Dual Manual Control - Advanced Features (universal power supply)

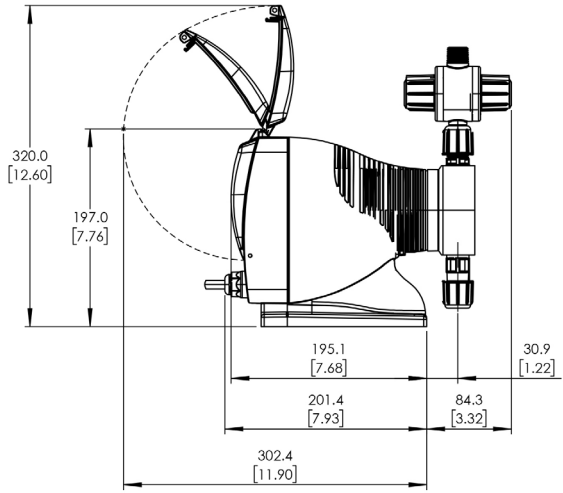
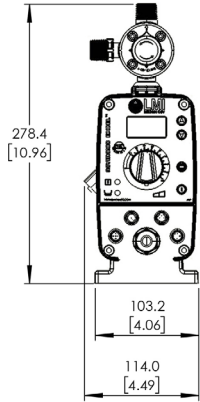
Power Code	Voltage	Frequency	Plug					
1	Dual or Universal	50-60 HZ	110 - 120V US Plug					
2	Dual or Universal	50-60 HZ	220 - 240V US Plug					
3	Dual or Universal	50-60 HZ	220 - 240V DIN Plug					
5	Dual or Universal	50-60 HZ	220 - 240V UK Plug					
6	Dual or Universal	50-60 HZ	220 - 240V Aust/NZ Plug					
Liquid End	Head	Fittings	Balls	Valve	Connections Suction/Discharge	Seat / O-Ring	RPM Kit	
<b>FastPrime™ Machined</b>								
940NI	Acrylic	PVC	Ceramic	-	PE 3/8" O.D.	PTFE/Polyprel®	RPM-842	
940SI	Acrylic	PVC	Ceramic	FV	PE 3/8" O.D.	PTFE/Polyprel®	RPM-842	
945NI	PP	PP	Ceramic	-	PE 3/8" O.D.	PTFE	RPM-843	
945SI	PP	PP	Ceramic	FV	PE 3/8" O.D.	PTFE	RPM-843	
948NI	PVC	PVC	Ceramic	-	PE 3/8" O.D.	PTFE/Polyprel®	RPM-842	
948SI	PVC	PVC	Ceramic	FV	PE 3/8" O.D.	PTFE/Polyprel®	RPM-842	
949NI	Acrylic	PVDF	PTFE	-	PE 3/8" O.D.	Polyprel®	RPM-939	
949SI	Acrylic	PVDF	PTFE	FV	PE 3/8" O.D.	Polyprel®	RPM-939	
947NP	316SS	316SS	316SS	-	1/4" NPT	316SS/PTFE	RPM-947	
<b>FastPrime™ Molded</b>								
842NI	PVDF	PVDF	Ceramic	-	PE 3/8" O.D.	PTFE/Polyprel®	RPM-842	
842SI	PVDF	PVDF	Ceramic	FV	PE 3/8" O.D.	PTFE/Polyprel®	RPM-842	
843NI	PVDF	PVDF	Ceramic	-	PE 3/8" O.D.	PTFE	RPM-843	
843SI	PVDF	PVDF	Ceramic	FV	PE 3/8" O.D.	PTFE	RPM-843	
848NI	PVC	PVC	Ceramic	-	PE 3/8" O.D.	PTFE/Polyprel®	RPM-842	
848SI	PVC	PVC	Ceramic	FV	PE 3/8" O.D.	PTFE/Polyprel®	RPM-842	
<b>AutoPrime™ De-gas</b>								
A40AI	Acrylic	PVC	Ceramic	-	PE 3/8" O.D.	PTFE/Polyprel®	RPM-A40A	
A40HI	Acrylic	PVC	Ceramic	FV	PE 3/8" O.D.	PTFE/Polyprel®	RPM-A40A	
A48AI	PVC	PVC	Ceramic	-	PE 3/8" O.D.	PTFE/Polyprel®	RPM-A40A	
A48HI	PVC	PVC	Ceramic	FV	PE 3/8" O.D.	PTFE/Polyprel®	RPM-A40A	
<b>High Viscosity</b>								
644VI	PP	PP	316SS	-	PE 1/2" OD / Vinyl 0.938" OD	PTFE	RPM-644	
644PI	PP	PP	316SS	-	PE 1/2" OD / Vinyl 0.938" OD	PTFE	RPM-644	
646VI	Acrylic	PP	316SS	-	PE 1/2" OD / Vinyl 0.938" OD	PTFE	RPM-646	

# Dimensions

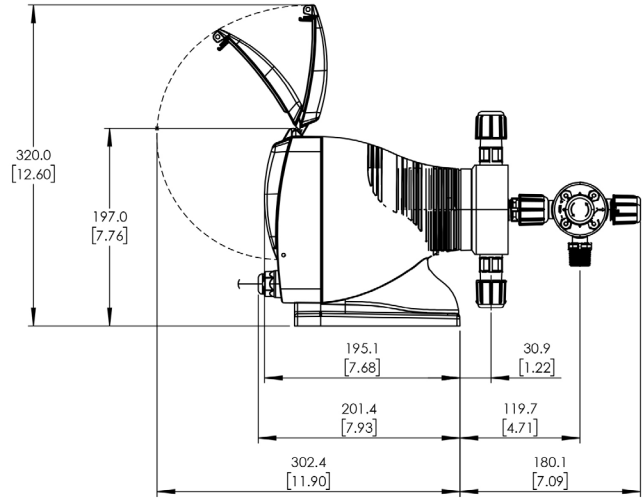
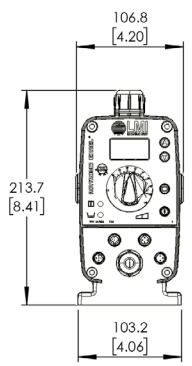
## Mounting Information



## Fast Prime Liquid Ends



## Auto Prime Liquid Ends



### About Ingersoll Rand Inc.

Ingersoll Rand Inc. (NYSE:IR), driven by an entrepreneurial spirit and ownership mindset, is dedicated to helping make life better for our employees, customers and communities. Customers lean on us for our technology-driven excellence in mission-critical flow creation and industrial solutions across 40+ respected brands where our products and services excel in the most complex and harsh conditions. Our employees develop customers for life through their daily commitment to expertise, productivity and efficiency. For more information, visit [www.IRCO.com](http://www.IRCO.com)



FastPrime is a trademark of Milton Roy, LLC  
 AutoPrime is a trademark of Milton Roy, LLC  
 StayPrime is a trademark of Milton Roy, LLC  
 Polyprel is a registered trademark of Milton Roy, LLC

Contact your local representative to find out more about Series PD Chemical Metering Pumps

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