# PD Series

# **Chemical Metering Pump**

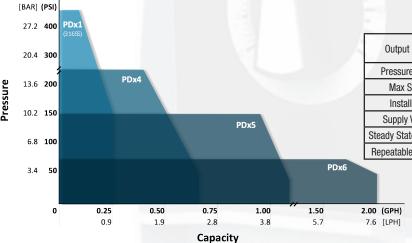
# **Designed to Last**

Introducing the PD Series chemical metering pump, the new standard in water treatment. This upgrade to LMI's most popular pump series includes an improved drive design, all new electronics, and proven FASTPRIME™ liquid ends. Available in Manual or Enhanced control models, the PD Series pump fits seamlessly into your process control application. The Manual model offers straightforward control without the need for tedious calculations. Its split-scale dial ensures precision, even at lower flow rates. The Enhanced model offers external control and a large graphical display to provide intuitive access to advanced features such as calibration assist, system and user totalizers, the new STAYPRIME™ degassing technology, and more.

Trusted by water treatment professionals for more than a generation, the PD Series chemical metering pump will continue to earn your trust for years to come.

# 

# Performance Specifications



| Output Range          | .002 – 2.0 GPH<br>(.008 – 7.6 LPH) |  |  |
|-----------------------|------------------------------------|--|--|
| Pressure Range        | 50-450 PSI (3.4-30.6 BAR)          |  |  |
| Max Stroke            | 160 SPM                            |  |  |
| Installation          | Indoor/Outdoor                     |  |  |
| Supply Voltage        | 115-230V / 50-60Hz                 |  |  |
| Steady State Accuracy | +/- 3%                             |  |  |
| Repeatable Accuracy   | +/- 3%                             |  |  |

Manual Model

**Enhanced Model** 

| FastPrime™ Liquid Ends* |     |      |      |      |  |  |  |  |  |
|-------------------------|-----|------|------|------|--|--|--|--|--|
|                         | PSI | GPH  | BAR  | LPH  |  |  |  |  |  |
|                         | 450 | 0.10 | 30.6 | 0.38 |  |  |  |  |  |
| PDx1                    | 300 | 0.20 | 20.4 | 0.76 |  |  |  |  |  |
|                         | 150 | 0.25 | 10.2 | 0.95 |  |  |  |  |  |
|                         | 250 | 0.35 | 17.0 | 1.32 |  |  |  |  |  |
| PDx4                    | 150 | 0.52 | 10.2 | 1.97 |  |  |  |  |  |
|                         | 50  | 0.68 | 3.4  | 2.57 |  |  |  |  |  |
|                         | 150 | 0.80 | 10.2 | 3.03 |  |  |  |  |  |
| PDx5                    | 110 | 1.00 | 7.5  | 3.79 |  |  |  |  |  |
|                         | 30  | 1.10 | 2.0  | 4.20 |  |  |  |  |  |
|                         | 70  | 1.70 | 4.8  | 6.44 |  |  |  |  |  |
| PDx6                    | 60  | 1.85 | 4.1  | 7.00 |  |  |  |  |  |
|                         | 50  | 2.00 | 3.4  | 7.57 |  |  |  |  |  |

#### \*Standard on PD0 and PD7 models

#### Features and Benefits

- Shared drive platform with universal 115-230V, 50/60 Hz power supply
- Flows from 2 GPH (7.57 LPH) up to 450 PSI (30.6 BAR)
- Simplified capacity control with constant stroke length to maintain calibration across the adjustable range
- Advanced electronics with dynamic compensation for temperature and voltage conditions
- FastPrime™ liquid ends (standard) that allow fast and easy priming with integrated bleed valve
- AutoPrime<sup>™</sup> liquid ends (optional), designed specifically for off-gassing liquids (See page 4 for performance specifications)
- Rugged construction with NEMA 4X/IP 65 housing for the harshest environments and outdoor use
- Compact footprint for efficient use of space in process applications or OEM configuration
- Agency certifications NSF 61 and 50 (pending), ETL, CE
- Built on decades of experience and fully backed by LMI's two-year warranty

# **Enhanced Functionality (PD7)**

- 2.4" Color LCD Intuitive navigation allows you to configure and operate with ease – view status and alerts from a distance to confirm safe operation
- External Control Inputs Automate your process with pulse pacing, remote start/stop, and tank level indication – ideal for proportional dosing
- Calibration Assist Simply draw from a column and adjust the estimated value on-screen to the measured actual – calibration is that easy
- System & User Totalizers An odometer for your pump that logs pump strokes, estimated volume, and power cycles – confirm pump operation between visits
- StayPrime™ Degassing Technology Automates the priming cycle after a period of idle pump time to ensure prime





| Drive E | Drive End |  |                  |         |       |          |       |                |             |         |  |  |
|---------|-----------|--|------------------|---------|-------|----------|-------|----------------|-------------|---------|--|--|
| Contro  | Control   |  |                  |         |       |          |       |                |             |         |  |  |
| PD01    |           | Manu   | Manual Control - |         |       |          |       |                |             |         |  |  |
| PD71    |           | Enhanced Control with Pulse Input, Remote Stop/Start, and Tank Level Input |                  |         |       |          |       |                |             |         |  |  |
|         | Powe      | Power Code   |                  |         |       |          |       |                |             |         |  |  |
|         | Χ         | See P  | ower Cod         | e Table |       |          |       |                |             |         |  |  |
|         |           | Liquid   | d End            |         | Head  | Fittings | Balls | Seat / O-Rings | Connections | RPM Kit |  |  |
|         |           | Machined FastPrime™  |                  |         |       |          |       |                |             |         |  |  |
|         |           | 907NI  | <b>D</b>         |         | 316SS | 316SS    | 316SS | 316SS / PTFE   | 1/4" NPT    | RPM-907 |  |  |
| PD01    | 1         | -907   | N                | Р       |       |          |       |                |             |         |  |  |

#### OUTPUT CODE 4 — 0.68

----- 0.68 GPH (2.6 LPH); 250 psi (17.0 bar)

| Drive E |      |  |          |                    |                |                |                  |          |  |  |  |  |
|---------|------|--|----------|--------------------|----------------|----------------|------------------|----------|--|--|--|--|
| Contro  | ol   |  |          |                    |                |                |                  |          |  |  |  |  |
| PD04    |      | Manua  | al Contr | ol -               |                |                |                  |          |  |  |  |  |
| PD74    |      | Enhanced Control with Pulse Input, Remote Stop/Start, and Tank Level Input |          |                    |                |                |                  |          |  |  |  |  |
|         | Powe | wer Code   |          |                    |                |                |                  |          |  |  |  |  |
|         | Χ    | See Power Code Table   |          |                    |                |                |                  |          |  |  |  |  |
|         |      | Liquid End Head Fittings Balls Seat / O-Rings RPM Kit                      |          |                    |                |                |                  |          |  |  |  |  |
|         |      | Molded FastPrime™  |          |                    |                |                |                  |          |  |  |  |  |
|         |      | 8:   | 22       | PVDF               | PVDF           | Ceramic        | PTFE / Polyprel® | RPM-822  |  |  |  |  |
|         |      | 8:   | 23       | PVDF               | PVDF           | Ceramic        | PTFE / Polyprel® | RPM-823  |  |  |  |  |
|         |      | 8:   | 28       | PVC                | PVC            | Ceramic        | PTFE /Polyprel®  | RPM-822  |  |  |  |  |
|         |      | Machined FastPrime™  |          |                    |                |                |                  |          |  |  |  |  |
|         |      | 9:   | 25       | PP                 | PP             | Ceramic        | PTFE / Polyprel® | RPM-823  |  |  |  |  |
|         |      | 9:   | 27       | 316SS              | 316SS          | 316SS          | 316SS / PTFE     | RPM-927  |  |  |  |  |
|         |      | 9:   | 28       | PVC                | PVC            | Ceramic        | PTFE / Polyprel® | RPM-822  |  |  |  |  |
|         |      | 9:   | 29       | Acrylic            | PVDF           | PTFE           | Polyprel®        | RPM-929  |  |  |  |  |
|         |      | 9:   | 20       | Acrylic            | PVC            | Ceramic        | PTFE / Polyprel® | RPM-822  |  |  |  |  |
|         |      | AutoP  | rime™    |                    |                |                |                  |          |  |  |  |  |
|         |      | A  | 28       | PVC                | PVC            | Ceramic        | PTFE / Polyprel® | RPM-A20A |  |  |  |  |
|         |      | A  | 20       | Acrylic            | PVC            | Ceramic        | PTFE / Polyprel® | RPM-A20A |  |  |  |  |
|         |      |  | Fastl    | Prime Valve Code   |                | AutoPrime Valv | re Code          |          |  |  |  |  |
|         |      |  | S        | with 4 Function Va | alve           | H with 4       | Function Valve   |          |  |  |  |  |
|         |      | N - A -  |          |                    |                |                |                  |          |  |  |  |  |
|         |      | Connection Code Also sold as   |          |                    |                |                |                  |          |  |  |  |  |
|         |      |  |          | I Imperial         |                | 2              |                  |          |  |  |  |  |
|         |      |  |          | M Metric           |                | 3              | }                |          |  |  |  |  |
|         |      |  |          | P Pipe (1/4        | " NPT, 316SS o | nly) 0         |                  |          |  |  |  |  |
| PD04    | 1    | - 822  | S        | I                  |                |                |                  |          |  |  |  |  |

#### **POWER CODE TABLE**

| Power Code | Voltage  | Frequency | Plug                  |
|------------|----------|-----------|-----------------------|
| 1          | 115/230V | 50-60 Hz  | 110-120V US Plug, UL  |
| 2          | 115/230V | 50-60 Hz  | 220-240V US Plug, UL  |
| 3          | 115/230V | 50-60 Hz  | 220-240V DIN Plug, CE |
| 5          | 115/230V | 50-60 Hz  | 220-240V UK Plug, CE  |
| 6          | 115/230V | 50-60 Hz  | 220-240V Aust/NZ Plug |

OUTPUT CODE 5 —

- 1.1 GPH (4.2 LPH); 150 psi (10.2 bar)

| Drive E | nd         |                          |                   |            |               |               |        |             |                  |          |  |
|---------|------------|--------------------------|-------------------|------------|---------------|---------------|--------|-------------|------------------|----------|--|
| Contro  | ol         |                          |                   |            |               |               |        |             |                  |          |  |
| PD05    |            | Manua                    | al Contr          | ol         | -             |               |        |             |                  |          |  |
| PD75    |            | Enhan                    | ced Co            | ntrol witl | h Pulse Input | , Remote Stop | /Starl | t, and Tank | Level Input      |          |  |
|         | Power Code |                          |                   |            |               |               |        |             |                  |          |  |
|         | Х          |                          |                   |            |               |               |        |             |                  |          |  |
|         |            | Liquid End Head Fittings |                   |            |               |               |        | Balls       | Seat / 0-Rings   | RPM Kit  |  |
|         |            | Molde                    | Molded FastPrime™ |            |               |               |        |             |                  |          |  |
|         | 832        |                          |                   |            | PVDF          | PVDF          |        | Ceramic     | Polyprel®        | RPM-832  |  |
|         |            | 8                        | 33                |            | PVDF          | PVDF          |        | Ceramic     | PTFE             | RPM-833  |  |
|         |            |                          | 38                |            | PVC           | PVC           |        | Ceramic     | Polyprel®        | RPM-832  |  |
|         |            | Mach                     | ined Fa           | stPrime    | тм            |               |        |             |                  |          |  |
|         |            | 9                        | 35                |            | PP            | PP            |        | Ceramic     | PTFE             | RPM-833  |  |
|         |            | 9                        | 37                |            | 316SS         | 316SS         |        | 316SS       | 316SS / PTFE     | RPM-937  |  |
|         |            | 9                        | 38                |            | PVC           | PVC           |        | Ceramic     | Polyprel®        | RPM-832  |  |
|         |            | 9                        | 39                | Acrylic    |               | PVDF          |        | PTFE        | Polyprel®        | RPM-939  |  |
|         |            | 9                        | 30                |            | Acrylic       | PVC           |        | Ceramic     | Polyprel®        | RPM-832  |  |
|         |            | AutoP                    | rime™             | I          |               |               |        |             |                  |          |  |
|         |            | Α                        | 38                |            | PVC           | PVC           |        | Ceramic     | PTFE / Polyprel® | RPM-A30A |  |
|         |            | A                        | 30                |            | Acrylic       | PVC           |        | Ceramic     | PTFE / Polyprel® | RPM-A30A |  |
|         |            |                          | Fast              | Prime Va   | alve Code     |               | Auto   | Prime Val   | ve Code          |          |  |
|         |            | S with 4 Function Val    |                   |            |               | ve            | Н      | with 4      | Function Valve   |          |  |
|         |            |                          | N                 | -          |               |               | Α      | -           |                  |          |  |
|         |            | Connection Code          |                   |            |               |               |        | Also s      | sold as          |          |  |
|         |            |                          |                   | ı          | Imperial      |               |        |             | 2                |          |  |
|         |            |                          |                   | M          | Metric        |               |        | (           | 3                |          |  |
|         |            |                          |                   | Р          | Pipe (1/4"    | NPT, 316SS o  | nly)   | (           | 0                |          |  |
| PD05    | 1          | - 832                    | S                 | I          |               |               |        |             |                  |          |  |

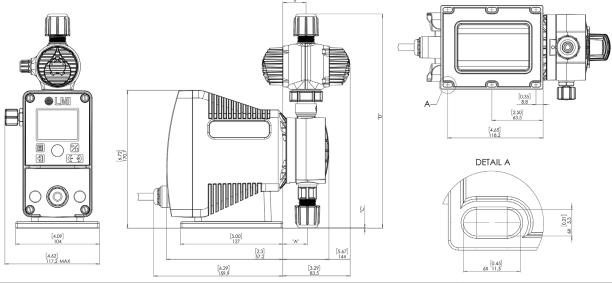
## OUTPUT CODE 6 -

----- 2.0 GPH (7.6 LPH); 70 psi (4.8 bar)

| Drive E |    |                              |          |                           |              |            |           |                  |          |
|---------|----|------------------------------|----------|---------------------------|--------------|------------|-----------|------------------|----------|
| Contro  | )l |                              |          |                           |              |            |           |                  |          |
| PD06    |    |                              | al Contr |                           |              |            |           |                  |          |
| PD76    |    |                              | ced Co   | ntrol with Pulse Input, I | Remote Stop  | /Start, aı | nd Tank L | evel Input       |          |
|         |    | r Code                       |          |                           |              |            |           |                  |          |
|         | Х  |                              |          | ode Table<br><b>Head</b>  | Fittings     |            | Balls     | Seat / 0-Rings   |          |
|         |    | Liquic                       | RPM Kit  |                           |              |            |           |                  |          |
|         |    | Molde                        | ed Fast  | Prime™                    |              |            |           |                  |          |
|         |    | 8-                           | 42       | PVDF                      | PVDF         | C          | eramic    | Polyprel®        | RPM-842  |
|         |    | 8-                           | 43       | PVDF                      | PVDF         | C          | eramic    | PTFE             | RPM-843  |
|         |    | 8-                           | 48       | PVC                       | PVC          | C          | eramic    | Polyprel®        | RPM-842  |
|         |    |                              |          |                           |              |            |           |                  |          |
|         |    | 9.                           | 45       | PP                        | PP           | C          | eramic    | PTFE             | RPM-843  |
|         |    | 9.                           | 47       | 316SS                     | 316SS        | 3          | 316SS     | 316SS / PTFE     | RPM-947  |
|         |    | 9.                           | 48       | PVC                       | PVC          | C          | eramic    | Polyprel®        | RPM-842  |
|         |    | 9.                           | 49       | Acrylic                   | PVDF         | PTFE       |           | Polyprel®        | RPM-949  |
|         |    | 9.                           | 40       | Acrylic                   | PVC          | C          | eramic    | Polyprel®        | RPM-842  |
|         |    | AutoP                        | rime™    |                           |              |            |           |                  |          |
|         |    | A                            | 48       | PVC                       | PVC          | C          | eramic    | PTFE / Polyprel® | RPM-A40A |
|         |    | A                            | 40       | Acrylic                   | PVC          | C          | eramic    | PTFE / Polyprel® | RPM-A40A |
|         |    |                              | Fastl    | Prime Valve Code          |              | AutoPri    | ime Valv  | e Code           |          |
|         |    |                              | S        | with 4 Function Valv      | е            | Н          | with 4 I  | Function Valve   |          |
|         |    |                              | N        | -                         |              | Α          | -         |                  |          |
|         |    | Connection Code Also sold as |          |                           |              |            |           |                  |          |
|         |    |                              |          | I Imperial                |              |            | 2         |                  |          |
|         |    |                              |          | M Metric                  |              |            | 3         |                  |          |
|         |    |                              |          | P Pipe (1/4" I            | NPT, 316SS o | nly)       | 0         |                  |          |
| PD06    | 1  | - 842                        | S        |                           |              |            |           |                  |          |

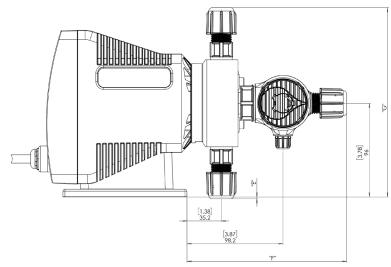
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| LIQUID FND MODEL             | "A"  |      | "    | "B"  |       | "C"  |       | "D"   |  |
|------------------------------|------|------|------|------|-------|------|-------|-------|--|
| LIQUID END MODEL             | INCH | ММ   | INCH | ММ   | INCH  | ММ   | INCH  | ММ    |  |
| LE-7XXNX                     | 1.20 | 30.5 | 1.13 | 28.8 | 0.34  | 8.6  | 7.84  | 199.2 |  |
| LE-7XXNX                     | 1.20 | 30.5 | 1.13 | 28.8 | 0.34  | 8.6  | 10.45 | 265.4 |  |
| LE-8XXNX                     | 1.20 | 30.5 | 1.13 | 28.8 | 0.01  | 0.3  | 8.17  | 207.5 |  |
| LE-8XXSX                     | 1.20 | 30.5 | 1.13 | 28.8 | 0.01  | 0.3  | 10.45 | 265.4 |  |
| LE-90XNX, LE-92XNX, LE-93XNX | 1.39 | 35.2 | 1.39 | 35.2 | 0.10  | 2.5  | 7.47  | 189.7 |  |
| LE-90XSX, LE-92XSX, LE-93XSX | 1.39 | 35.2 | 1.39 | 35.2 | 0.10  | 2.5  | 9.75  | 247.6 |  |
| LE-94XNX                     | 1.39 | 35.2 | 1.39 | 35.2 | -0.07 | -1.8 | 7.64  | 194   |  |
| LE-94XSX                     | 1.39 | 35.2 | 1.39 | 35.2 | -0.07 | -1.8 | 9.92  | 251.9 |  |

#### AUTOPRIME™ LIQUID END



| LIQUID                             | "     | E"   |      | "F"   | "(   | G"    |
|------------------------------------|-------|------|------|-------|------|-------|
| END<br>Model                       | INCH  | ММ   | INCH | ММ    | INCH | ММ    |
| LE-A1XNX,<br>LE-A2XNX,<br>LE-A3XNX | -0.10 | -2.5 | 4.15 | 105.4 | 7.46 | 189.6 |
| LE-A1XSX,<br>LE-A2XSX,<br>LE-A3XSX | -0.10 | -2.5 | 6.43 | 163.3 | 7.46 | 189.6 |
| LE-A4XNX                           | 0.07  | 1.8  | 4.15 | 105.4 | 7.63 | 193.8 |
| LE-A4XSX                           | 0.07  | 1.8  | 6.43 | 163.3 | 7.63 | 193.8 |

### **Performance Specifications**

AutoPrime™ Degassing **Liquid Ends** 

|      | PSI | GPH  | BAR  | LPH  |
|------|-----|------|------|------|
|      | 250 | 0.20 | 17.0 | 0.76 |
| PDx4 | 150 | 0.30 | 10.2 | 1.14 |
| PDx5 | 110 | 0.75 | 7.5  | 2.84 |
| LDY2 | 50  | 0.85 | 3.4  | 3.22 |
| PDx6 | 50  | 1.75 | 3.4  | 6.62 |
|      | 30  | 1.85 | 2.0  | 7.00 |



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