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› LMI Unidose UD001-238NU Metering Pump Instruction Manual

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LMI Unidose UD001-238NU Metering Pump Instruction Manual

Model: UD001-238NU | Brand: LMI Metering Pump

1. INTRODUCTION

The LMI Unidose UD001-238NU metering pump is designed for precise chemical dosing in residential, commercial, and light industrial water treatment applications. This manual provides essential information for the safe and effective installation, operation, and maintenance of your metering pump. Please read these instructions thoroughly before use.

2. SAFETY INFORMATION

WARNING: Failure to follow these safety instructions may result in injury, equipment damage, or property damage.

- Always disconnect power before performing any maintenance or service on the pump.
- Wear appropriate personal protective equipment (PPE) when handling chemicals.
- Ensure the pump is installed in a well-ventilated area.
- Verify that the power supply voltage matches the pump's requirements (115V AC).
- Do not operate the pump with damaged cords or connections.
- Keep children and unauthorized personnel away from the pump and chemical storage.
- Refer to Material Safety Data Sheets (MSDS) for all chemicals being used.

3. PRODUCT OVERVIEW

The LMI Unidose UD001-238NU is a robust metering pump designed for reliable and precise chemical injection. It features an adjustable flow rate and durable construction suitable for various water treatment needs.



Image 3.1: LMI Unidose UD001-238NU Metering Pump. This image shows the compact design of the pump, highlighting its main body and connections.

Key Features:

- Adjustable flow rate from 1 to 24 GPD (gallons per day).
- Maximum pressure of 80 PSI.
- Manual speed control via a single dial.
- NEMA 4X/IP65 housing for environmental protection.
- Durable construction with PVC head, ceramic balls, and Aflas O-rings.
- UV-resistant tubing.
- Designed for above-ground installation.
- Certifications: NSF 61, UL.

4. TECHNICAL SPECIFICATIONS

Specification	Value
Model	UD001-238NU
Series	LMI Unidose UD Series
Flow Rate	Adjustable from 1 to 24 GPD (0.02 gpm max)
Max Pressure	80 PSI
Power	115V AC (dual voltage capability with replaceable cord)
Control Type	Manual speed control via single dial
Housing	NEMA 4X/IP65

Specification	Value
Construction Materials	PVC head, ceramic balls, Aflas O-rings, UV-resistant tubing
Max Temperature	122°F (50°C)
Mounting	Above-ground installation
Certifications	NSF 61, UL
Weight	8.1 lbs
Dimensions (L x W x H)	12" x 7" x 10"

Included Accessories:

- Foot valve
- Injection valve
- Tubing
- Tubing connections

5. SETUP AND INSTALLATION

Proper installation is crucial for the optimal performance and longevity of your LMI Unidose pump. This pump is designed for above-ground installation.

5.1 Mounting the Pump

Securely mount the pump to a stable, vertical surface using appropriate fasteners. Ensure there is sufficient space around the pump for ventilation, maintenance, and access to controls and connections.

5.2 Tubing Connections

1. **Suction Line:** Connect one end of the provided tubing to the pump's suction port. Attach the foot valve to the other end of this tubing and place it into the chemical supply tank. Ensure the foot valve is submerged and positioned to avoid drawing air or sediment.
2. **Discharge Line:** Connect the other length of tubing to the pump's discharge port. Attach the injection valve to the other end of this tubing. Install the injection valve into the water line or system where the chemical is to be dosed. Ensure the injection point is downstream of any pressure-reducing devices and allows for proper mixing.
3. **Secure Connections:** Use the provided tubing connections to ensure all tubing is securely fastened to prevent leaks and air ingress.

5.3 Electrical Connection

The LMI Unidose UD001-238NU operates on 115V AC. Connect the pump's power cord to a grounded 115V AC outlet. Ensure the electrical circuit is protected by a ground fault circuit interrupter (GFCI) if required by local codes.



Image 5.1: Standard 115V AC power plug. This image illustrates the type of plug used for the pump's electrical connection.

Note: The pump has dual voltage capability. If converting to 230V, a different cord and internal wiring adjustments may be required. Consult a qualified electrician or the manufacturer for 230V conversion.

6. OPERATING INSTRUCTIONS

6.1 Priming the Pump

Before initial operation or after maintenance, the pump must be primed to remove any air from the pump head and suction line.

1. Ensure the suction line and foot valve are submerged in the chemical solution.
2. Loosen the bleed valve (if present) or the discharge tubing connection at the pump head slightly to allow air to escape.
3. Turn the pump on and set the flow rate dial to maximum.
4. Allow the pump to run until a steady stream of chemical solution, free of air bubbles, emerges from the bleed point.
5. Tighten the bleed valve or discharge connection. The pump is now primed.

6.2 Adjusting Flow Rate

The flow rate of the UD001-238NU pump is manually adjusted using the single dial located on the pump's control panel. Rotate the dial to increase or decrease the desired chemical dosage. The flow rate can be adjusted from 1 to 24 GPD.

- Turn the dial clockwise to increase the flow rate.
- Turn the dial counter-clockwise to decrease the flow rate.

Monitor the chemical consumption and system performance to fine-tune the flow rate for your specific application.

7. MAINTENANCE

Regular maintenance ensures the reliable operation and extends the lifespan of your metering pump.

7.1 Routine Checks

- **Inspect Tubing:** Periodically check the suction and discharge tubing for kinks, cracks, or signs of wear. Replace damaged tubing immediately.
- **Check Connections:** Ensure all tubing connections are tight and free of leaks.
- **Foot Valve:** Inspect the foot valve in the chemical tank for blockages or debris. Clean as necessary.
- **Injection Valve:** Verify the injection valve is not clogged and is functioning correctly.
- **Pump Head:** Keep the pump head clean and free of chemical residue.

7.2 Cleaning

If the pump is used with chemicals that can cause buildup, periodic cleaning of the pump head and valves may be necessary. Consult the chemical manufacturer's guidelines for appropriate cleaning agents. Always flush the pump with clean water before and after cleaning with other agents.

8. TROUBLESHOOTING

This section addresses common issues you might encounter with your LMI Unidose pump.

Problem	Possible Cause	Solution
Pump not drawing chemical / losing prime	◦ Air leak in suction line or connections ◦ Foot valve clogged or not submerged ◦ Pump not properly primed ◦ Chemical tank empty ◦ Excessive suction lift	◦ Check and tighten all suction line connections. ◦ Clean foot valve; ensure it is fully submerged. ◦ Re-prime the pump (refer to Section 6.1). ◦ Refill chemical tank. ◦ Relocate pump closer to the chemical tank if possible.
Pump running but no chemical flow	◦ Discharge line blocked or injection valve clogged ◦ Pump head valves (check balls) stuck or dirty ◦ System pressure too high for pump	◦ Inspect and clear discharge line and injection valve. ◦ Clean pump head and check balls. ◦ Verify system pressure is within pump's maximum (80 PSI).
Inconsistent dosing	◦ Air in the system ◦ Fluctuating system pressure ◦ Worn pump head components	◦ Ensure pump is fully primed and no air leaks. ◦ Install a back-pressure valve or pulsation dampener if needed. ◦ Inspect and replace pump head components if worn.

Problem	Possible Cause	Solution
Pump not turning on	◦ No power supply ◦ Damaged power cord or internal wiring	◦ Check power outlet and circuit breaker. ◦ Inspect power cord for damage. Contact qualified personnel for internal wiring issues.

9. WARRANTY AND SUPPORT

For specific warranty information regarding your LMI Unidose UD001-238NU metering pump, please refer to the documentation provided at the time of purchase or contact LMI Metering Pump customer support directly. Keep your purchase receipt as proof of purchase.

If you require technical assistance or replacement parts, please contact the manufacturer or your authorized distributor. Provide your pump's model number (UD001-238NU) and serial number (if applicable) when seeking support.