

# DISPENSE PUMPS

# YOUR SPECS OUR EXPERTISE GREAT SOLUTIONS

FOR YOUR APPLICATION



# FOR YOUR MARKET

## *In Vitro Diagnostics*



Precision fluid control is critical throughout any diagnostic process – from preparing and transporting delicate samples to ensuring reliable detection. As a result, diagnostics applications increasingly require pumps that are multifunctional, integrating fluid control and flexible pumping options without compromising performance or reliability.

The challenge of meeting these needs is finding a dispense pump that offers the right combination of features and benefits. These include:

## *Scientific Instruments*



- Pumps with low pulsation produce stable flow and optimal detection.
- Chemical inertness for compatibility with a wide range of reagents.
- Low internal volume to reduce transport volume and wash cycle time.
- High reliability to minimize system maintenance and downtime.
- Dispense volume precision to improve test accuracy.

## *Environmental Analyzers*



Lee Pumps offer these advantages and more – not just for diagnostic instruments, but in a wide range of high-precision applications such as mass spectrometry and environmental analysis in remote locations.

## FEATURED APPLICATIONS

REAGENT DISPENSING

SAMPLE ALIQUOTING

PIPETTING

PROBE WASH

SENSOR CALIBRATION



## THE LEE ADVANTAGE



*Typical Syringe Pump*

*Lee Precision  
Dispense Pump*

### INNOVATIVE, SOLUTION-DRIVEN ENGINEERING.

When application demands change, you need a pump supplier who can respond quickly. The Lee Company has been adapting fluid control technologies to changing needs since our inception. Ongoing research, design and development help us advance pump performance, transforming challenges into deliverable solutions. For decades, best-practice design principles, extensive in-house resources, and rigorous qualification testing have ensured that every Lee pump is fully proven before it ships. This commitment to technology fosters creativity, and allows Lee to offer the best dispense pumps available.

### COMMITMENT TO QUALITY AND RELIABILITY.

Quality at The Lee Company is a company-wide, management driven commitment. Lee invests heavily in facilities, people and state-of-the-art equipment, enabling us to perform all machining, assembly and testing in-house. Every component is 100% functionally tested prior to shipment to ensure the highest levels of reliability and repeatability. This commitment to end-to-end quality control ensures that Lee products will consistently meet and exceed the performance demands of all applications.



### THE BEST POSSIBLE PUMP FOR YOU.

We offer a broad line of standard precision dispense pumps, but meeting the exact requirements of a particular application often requires a custom solution. Just tell us your needs, and we'll provide the ideal combination of performance, materials, electrical specifications and fluidic interface you require. And to facilitate that process, our worldwide sales force of degreed engineers stands ready to provide fast, accurate technical assistance to help you find the best solution for your fluid control challenges.

# LEE DISPENSE PUMPS

## VARIABLE VOLUME DISPENSE PUMPS

Lee dispense pumps can be the most essential component in a fluidic system, especially when dispense accuracy and precision are critical. Featuring a stepper motor driven, positive displacement design that is maintenance-free, our variable volume pumps can be positioned anywhere the fluidic requirements dictate, regardless of accessibility needs.

- **MAINTENANCE-FREE**

A robust stepper motor drive with wear-resistant materials helps achieve consistent performance across the life of the pump.

- **PERFORMANCE**

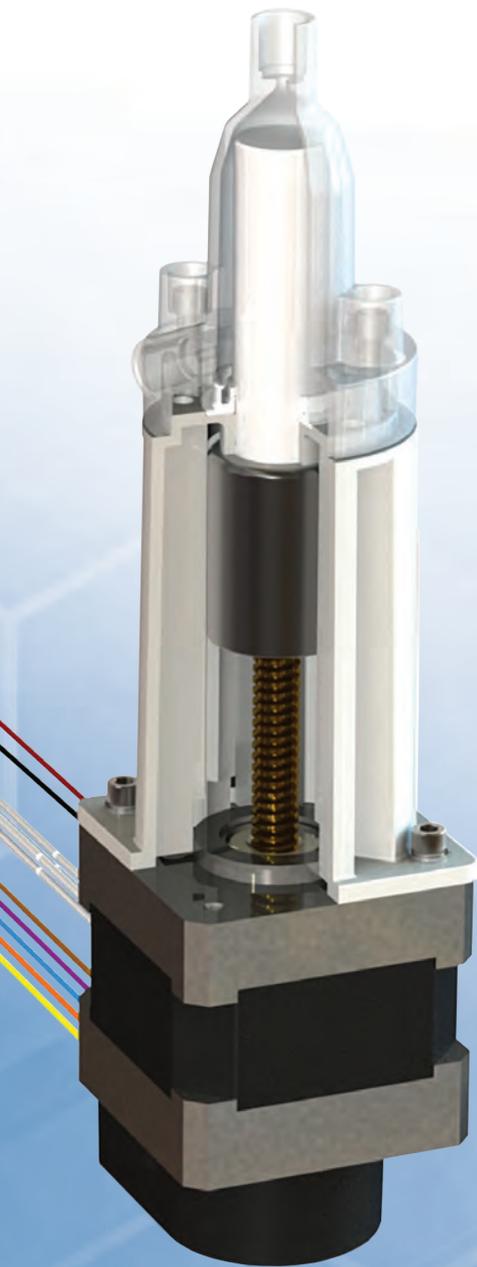
Minimal un-swept volume together with an optical encoder for piston feedback enables unparalleled dispensing results.

- **RELIABILITY**

With a unique drivetrain design, end of stroke position sensor, and proprietary materials, our pumps have been qualified beyond 10 million cycles while maintaining accuracy and precision.

- **CUSTOMIZABLE**

Special port head materials and module designs with integrated fluidic components are available to meet specific application requirements.



## FIXED VOLUME DISPENSE PUMPS

Lee dispense pumps offer greater design flexibility and cost savings to medical and scientific industries, regardless of the application. With their compact, solenoid-driven, chemically inert, positive-displacement design, our fixed volume dispense pumps provide a self-priming feature during start-up to ensure consistent operation beginning with the first dispense.



- **CHEMICALLY INERT**  
Inert materials and a flexible diaphragm isolates the solenoid operating mechanism from the flow path.
- **PERFORMANCE**  
With an optimized housing and diaphragm design offering a controlled deflection, flow pulsation is minimized delivering stable performance in each dispense.
- **RELIABILITY**  
Using a highly engineered solenoid mechanism and diaphragm in conjunction with integrated check valves, our pumps have been qualified beyond 10 million cycles while maintaining accuracy and precision.
- **SELF-PRIMING**  
Energizing the solenoid deflects the diaphragm, creating a partial suction that draws fluid into the pump cavity through the inlet check valve, while simultaneously closing the outlet check valve.



# COMPLETE FLUID CONTROL

The Lee Company is wholly dedicated to high-precision fluid control. We offer a wide range of solutions, all engineered to deliver the highest levels of reliability and performance.



## Control Solenoid Valves

- 2-Way & 3-Way Designs
- Compact & Lightweight
- Conventional, Latching & Quiet Operation Models
- Low Power Consumption & Low Leakage
- Long Cycle Life



## Dispense Solenoid Valves

- 2-Way Axial Flow Design
- Low Internal Volume
- Fast Response Time
- Multiple Seal Materials Available
- Long Cycle Life



## Isolation Solenoid Valves

- 2-Way & 3-Way Designs
- Chemically Inert
- Diaphragm & Pinch Tube Models
- Low Internal Volume
- Multiple Seal Materials Available



## Nozzles

- Atomizing (Airless & Air Assisted) and Dispensing Designs
- Different Mounting Options
- Wide Range of Orifice Sizes
- Easy Integration with Lee's Dispense Solenoid Valves



## MINSTAC

- Miniature Inert System of Tubing and Components
- Compatible with many of Lee's Miniature Solenoid Valves, Dispense Pumps and Nozzles
- Compact Size
- Wide Variety of Mounting Sizes and Options Available



## Manifold Assembly Technology

- Design Flexibility
- Wide Variety of Material Options & Techniques
- Integrated Components
- Reduced Assembly & Installation Costs
- Value Added Solution, 100% Tested



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