



Actual Size

A new perspective on size, performance and reliability.



Miniature Dispense Pumps from Lee

**Performance you can depend on –
in the palm of your hand.**

Need to build a device with a smaller footprint?
Precise, repeatable performance? Reliable operation?
Lee miniature dispense pumps can help you deliver
on all counts.

Compact Design

Small size, light weight and low power consumption
permit Lee pumps to be located wherever the fluidic
requirements dictate, regardless of maintenance
accessibility.



Consistent Performance

Lee pumps are specifically designed for consistent,
repeatable performance, with a CV as low as 0.04%
at full stroke and volume resolution as small as 0.04 μL .

Reliable Operation

Lee pumps feature chemically inert construction
and are engineered to be completely maintenance
free. This provides an operating life of
5,000,000 cycles minimum.

Design Flexibility

Lee offers two complete pump lines, as well
as an extensive custom design capability
for the ultimate in design flexibility.

- Stepper motor-driven variable volume pumps
- Solenoid operated fixed volume pumps

The ideal solution for automated liquid handling

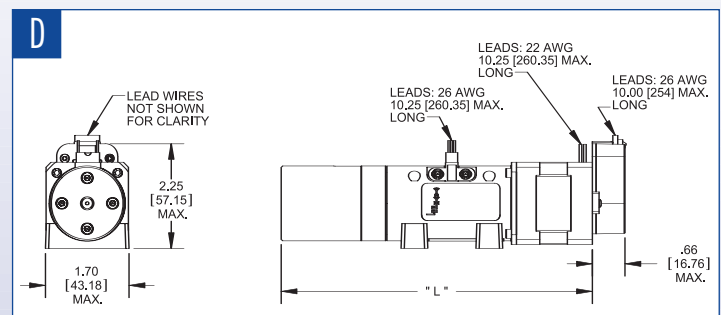
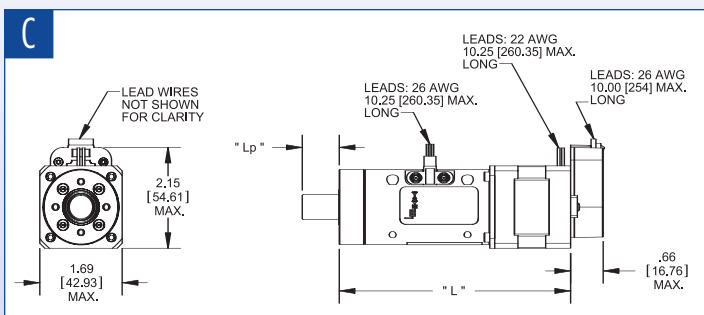
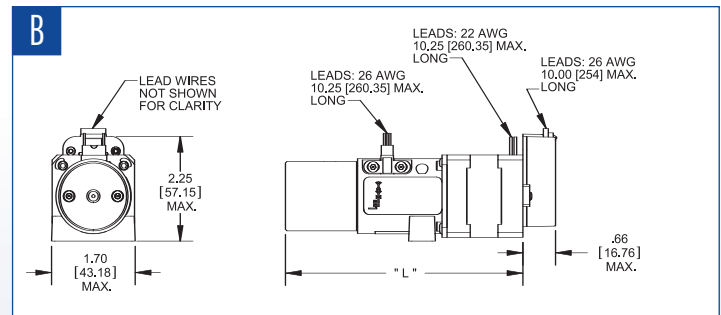
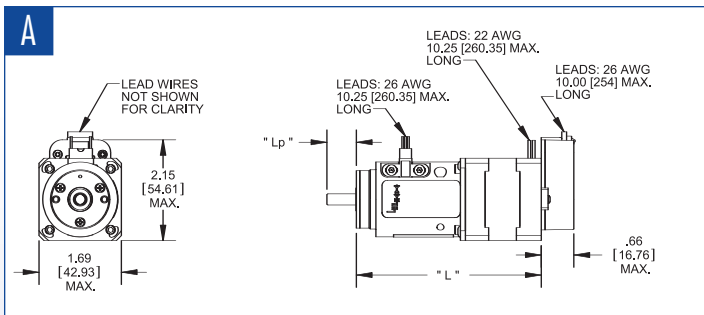
If you need superior performance from your next design
– for in vitro diagnostics, scientific instrumentation,
or drug discovery – put reliable, high-precision liquid
handling right where you need it most. Specify miniature
dispense pumps from Lee, where doing great things in
small spaces is our specialty.



High Performance LPV Pumps

The ideal combination of speed, size, accuracy and small dispense volumes. With a long life and maintenance-free operation, High Performance LPV Pumps offer a robust solution for even the most demanding dispensing applications. The standard configuration includes an encoder and an End of Stroke (EOS) sensor.

Part Number	Configuration	Volume (µL)	Style	Wetted Materials	Minimum Dispense (µL)	Pressure (psi)	L (inches)	Lp (inches)
IPVA1700350L	A	50	Manifold	Ceramic, UHMW PE, 316 SS, EPDM	0.04	85	3.78	0.60
IPVA1720350L	B	50	¼-28 Fitting	Ceramic, UHMW PE, PMMA	0.04	85	4.84	-
IPVA1750350L	B	50	¼-28 Fitting	Ceramic, UHMW PE, PEEK	0.04	85	4.84	-
IPVA1700325D	C	250	Manifold	Ceramic, UHMW PE, 316 SS, EPDM	0.20	85	3.84	0.60
IPVA1720325D	D	250	¼-28 Fitting	Ceramic, UHMW PE, PMMA	0.20	85	4.84	-
IPVA1750325D	D	250	¼-28 Fitting	Ceramic, UHMW PE, PEEK	0.20	85	4.84	-
IPVA1700330H	C	3000	Manifold	Ceramic, UHMW PE, 316 SS, EPDM	1.0	95	4.76	0.80
IPVA1720330H	D	3000	¼-28 Fitting	Ceramic, UHMW PE, PMMA, 316 SS	1.0	95	6.32	-
IPVA1750330H	D	3000	¼-28 Fitting	Ceramic, UHMW PE, PEEK, 316 SS	1.0	95	6.32	-



Innovation in miniature.

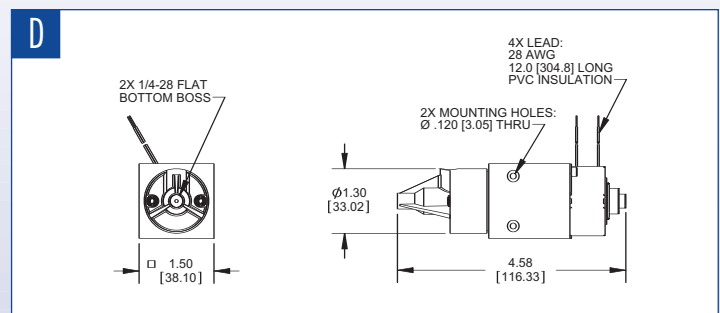
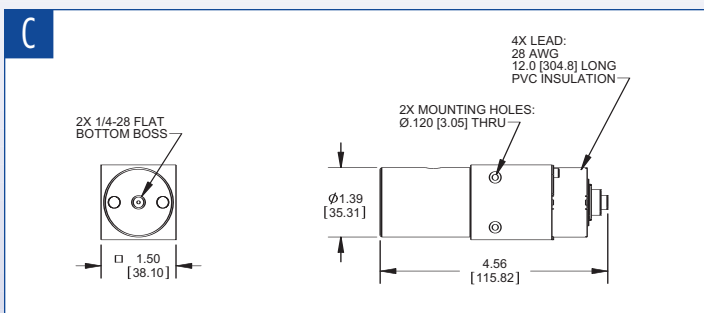
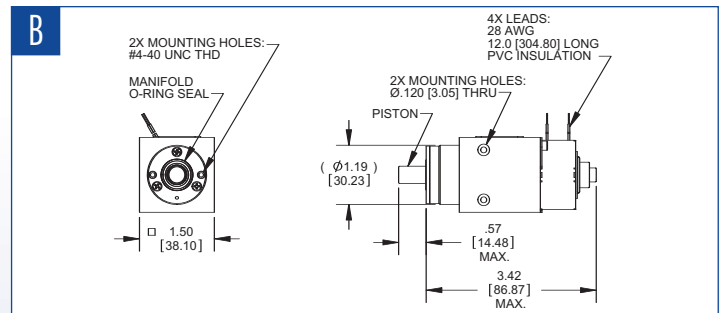
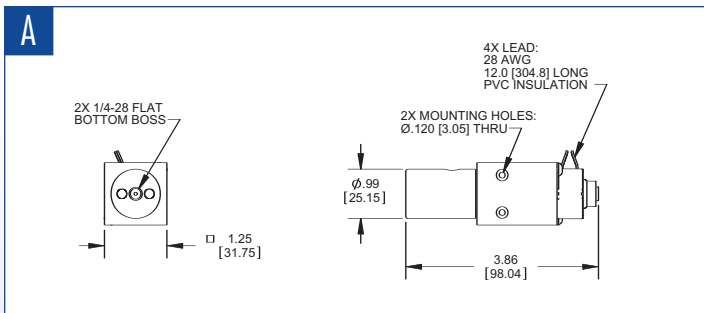


Standard Performance LPV Pumps

Reliable performance on a smaller scale. Standard Performance LPV Pumps offer the same reliability as our High Performance series, but in a smaller, lighter package for applications requiring lower dispensing speeds and pressures up to 15 psi.

Part Number	Configuration	Volume (μL)	Style	Wetted Materials	Minimum Dispense (μL)
LPVA1010050L	A	50	1/4-28 Fitting	PMMA, Ceramic, UHMW PE	0.1
LPVA1050050L	A	50	1/4-28 Fitting	PEEK, Ceramic, UHMW PE	0.1
LPVA1500025D	B	250	Manifold	316 SS, EPDM, Ceramic, UHMW PE	0.5
LPVA1520025D	C	250	1/4-28 Fitting	PMMA, Ceramic, UHMW PE	0.5
LPVA1550025D	C	250	1/4-28 Fitting	PEEK, Ceramic, UHMW PE	0.5
LPVA1551025D	C	250	1/4-28 Fitting	PEEK, Sapphire, UHMW PE	0.5
LPVA1550125D ¹	–	250	1/4-28 Fitting	PEEK, Ceramic, UHMW PE	0.5
LPVA1500075D	B	750	Manifold	316 SS, EPDM, Ceramic, UHMW PE	1.5
LPVA1520075D	C	750	1/4-28 Fitting	PMMA, Ceramic, UHMW PE	1.5
LPVA1550075D	D	750	1/4-28 Fitting	PEEK, Ceramic, UHMW PE	1.5
LPVA1551075D	D	750	1/4-28 Fitting	PEEK, Sapphire, UHMW PE	1.5
LPVA1521075D ¹	–	750	1/4-28 Fitting	PMMA, Sapphire, UHMW PE	1.5
LPVA1550175D ¹	–	750	1/4-28 Fitting	PEEK, Ceramic, UHMW PE	1.5

¹ These are special order models which include end of stroke sensors.

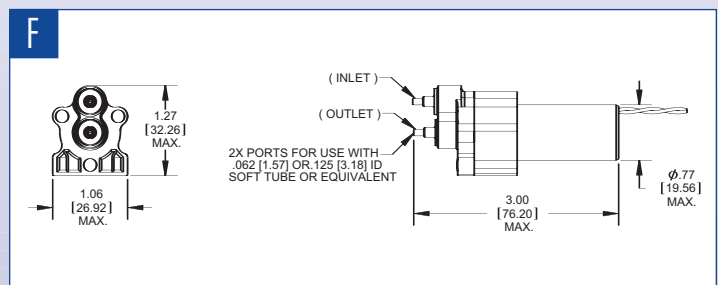
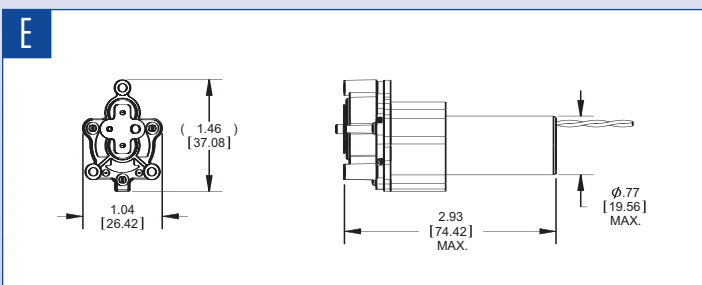
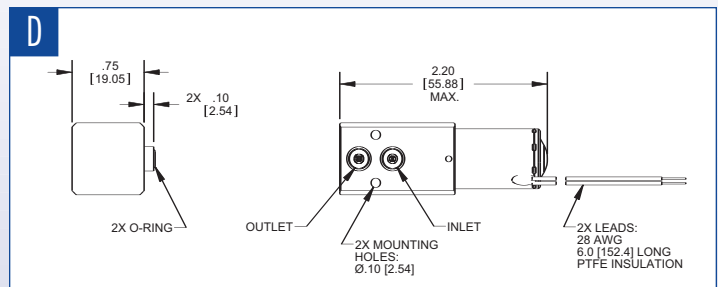
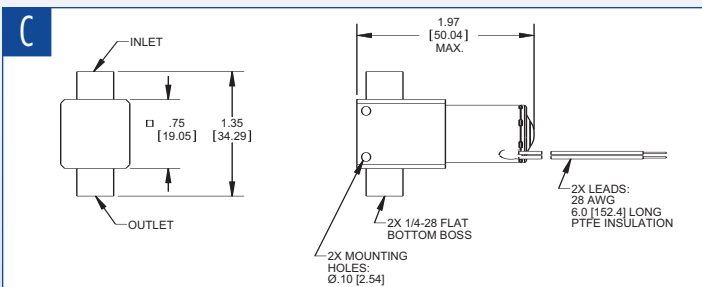
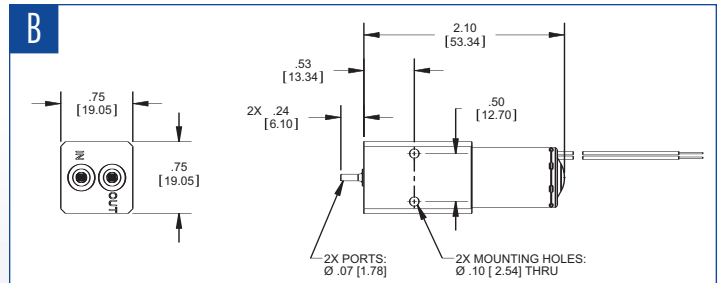
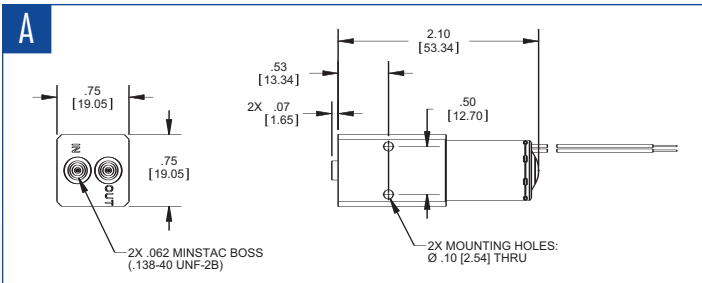


LPL Solenoid Pumps

Consistent fixed-volume dispensing. LPL Solenoid Pumps simplify the circuitry and minimize size. LPL pumps are designed with an internal, normally-closed seat that prevents by-pass leakage and siphoning when the pump is off. Standard wetted materials are PEEK and FKM (Viton®). Other elastomers are available upon request.

Part Number	Configuration	Volume (µl)	Style	Accuracy (%)
LPLA__10350L ¹	A	50	062 MINSTAC®	3
LPLA__10550L ¹	A	50	062 MINSTAC®	5
LPLA__10050L ¹	A	50	062 MINSTAC®	10
LPLA__20350L ¹	B	50	.070 Port	3
LPLA__20550L ¹	B	50	.070 Port	5
LPLA__20050L ¹	B	50	.070 Port	10
LPLA__30350L ¹	C	50	¼-28 Flat Bottom Boss	3
LPLA__30550L ¹	C	50	¼-28 Flat Bottom Boss	5
LPLA__30050L ¹	C	50	¼-28 Flat Bottom Boss	10
LPLA__40350L ¹	D	160	Manifold	3
LPLA__40550L ¹	D	160	Manifold	5
LPLA__40050L ¹	D	160	Manifold	10
LPWA2440122D	E	220	Manifold	10
LPWA2420113D	F	130	Ported	10

¹ Pumps are available in 12 and 24 vdc configurations (Coil Voltage: LPLA__10350L, Insert 12=12vdc or 24=24vdc)



Innovation in Miniature

Lee miniature dispense pumps are just one part of The Lee Company's complete line of precision fluid control products that includes miniature solenoid valves, micro dispense valves and nozzles, integrated manifolds and other precision fluid handling components. The Lee Company's extensive research facilities and experienced teams of engineers keep the company at the forefront of fluid control technology. In addition, Lee maintains an international network of sales engineers ready to assist you in solving your fluid control problems. For more information, contact a Lee Sales Engineer today, or visit www.TheLeeCo.com.



VHS Micro Dispense Valves

- 2-way solenoid valves
- High speed—up to 1200 Hz
- Dispense volumes as small as 25 nL
- Multiple porting configurations
- Response time as fast as 0.25 ms
- Pressures to 120 psig
- Low power consumption



Nozzles

- Removable
- Wide range of orifice sizes
- Custom sizes and mounting available
- Can be mounted directly to Lee VHS valves
- Accurate dispensing of microliter and nanoliter volumes



Micro Inert Valves

- 2 & 3-way chemically inert valves
- 20 ms response time
- Low power consumption
- Multiple material and port options available
- 10 million cycles minimum



Y Valves

- 2 & 3-way chemically inert valves
- Zero dead volume
- Pressures to 30 psi
- Variety of porting options
- Standard and high flow models available



High Density (HDI) Control Valves

- 3-way solenoid valves
- Compact design: .30" center to center mounting
- 2 ms response time
- Available in plug-in, face mount & ported styles
- Pressures to 45 psig
- Long life – 250 million cycles



MINSTAC® Fittings

- Lee's miniature inert system of tubing and components
- Precisely controls flow rate, pressure, filtration, atomization and other performance factors
- Compatible with many of Lee's miniature valves, pumps and nozzles



The Lee Company Electro-Fluidic Systems Division

The Lee Company

2 Pettipaug Road, PO Box 424, Westbrook, CT 06498-0424

Tel: 860-399-6281 • Fax: 860-399-7037 • www.TheLeeCo.com

Lee Sales Offices

Huntington Beach, CA	714-899-2177	London, England	+44 1 753-886664
Seattle, WA	425-488-5842	Paris, France	+33 1 30 64-9944
Irving, TX	972-791-1010	Frankfurt, Germany	+49 69 905-0660
Chicago, IL	773-693-0880	Milan, Italy	+39 02 439 81750
Southfield, MI	248-827-0981	Stockholm, Sweden	+46 8 579 70170
Tampa, FL	813-287-9293		

