Micro Volume Dispensing From DL Technology®

DL Technology is dedicated to providing dispensing solutions in surface mount, semiconductor packaging, and high density interconnect (HDI) markets. Through its valve technology and custom needle design, the company provides a total solution for micro volume dispensing and superior material control. These two product technologies also represent the depth of the company's engineering capability to address a myriad of challenges in electronics manufacturing today.

Valve Technology

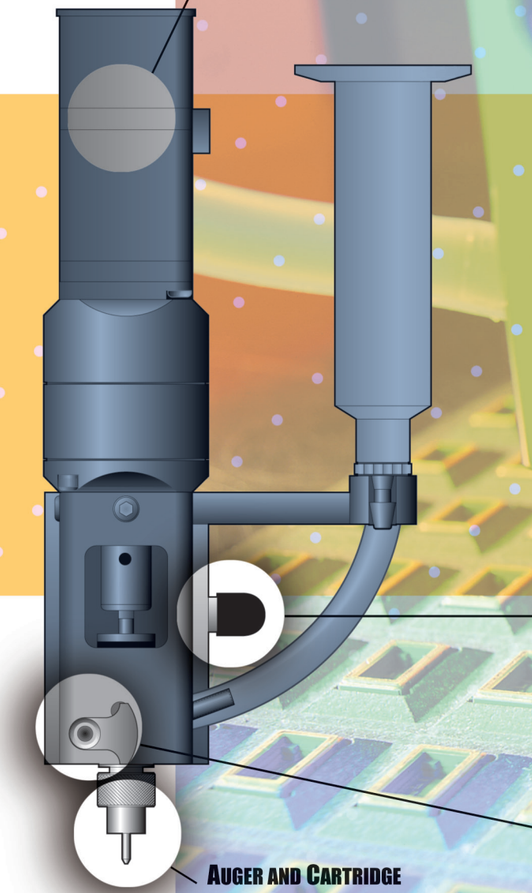
The DL Micro Valve is specifically designed for dispensing micro volumes of material in precise, repeatable patterns. The brushless servo motor, programmable encoder, and carbide auger and cartridge are combined for the most accurate dispensing capability in the industry. The cartridge is available in three styles: Floating DL Z-Cartridge for footed needles; Fixed DL Z-Cartridge for non-footed needles; and Fixed Luer Z-Cartridge for Luer-Lok® style needles. The soft-mounted syringe reduces settling effects on material that can occur during repeated up and down Z-axis movement of the dispensing head. Plus, cleaning and maintenance are minimal, reducing downtime and overhead costs. Available in left- and right-hand configurations.

Custom Needle Design

DL Technology custom dispensing needles are designed for precise, repeatable application of materials. All DL Technology needles are precision machined from a single piece of solid stainless steel, and feature a conically-chamfered tip that ensures complete transfer of material from the needle to the substrate or package.

Needle	Gauge	Material	Length
Footed	13-31	Stainless Steel	0.25 in (6.35mm) 0.35 in (8.89mm)
Non-Footed	13-31	Stainless Steel	0.25 in (6.35mm) 0.35 in (8.89mm)
Underfill	13-31	Stainless Steel	0.25 in (6.35mm) 0.35 in (8.89mm)
Luer-Lok	11-32	Stainless Steel Plastic	0.12 in (3.05mm) 0.15 in (3.81mm) 0.18 in (4.57mm) 0.25 in (6.35mm) 0.50 in (12.7mm) 1.00 in (25mm) 1.50 in (38mm)
Custom	11-31	Per Request	Per Request

Luer-Lok is a registered trademark of Becton, Dickenson, and Company.
Patents Pending.



Servo Motor/Encoder

The brushless servo motor precisely controls the rotation of the auger. A programmable encoder provides more than 57,000 counts per 360° revolution.

Easy-Release Pump

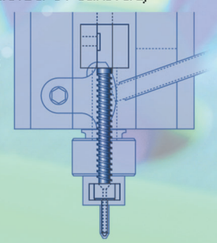
A push button quickly releases the entire pump assembly from the bracket, minimizing maintenance and changeover time.

Easy-Release Cartridge Assembly

The cartridge, auger, and needle are the only wetted parts and can be cleaned in minutes. The assembly is easily extracted with the syringe and feed tube as one piece for either cleaning or storage.

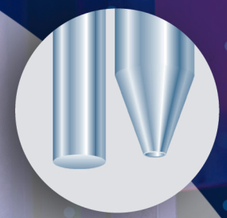
Auger and Cartridge Construction

The auger and cartridge liner are constructed of carbide, creating an almost frictionless operation.



Footed Needle

Designed for surface mount epoxy, solder paste, conductive epoxy, and other materials for which it is important to maintain a fixed Z-offset from the substrate.

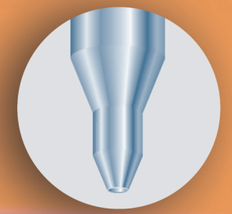


Non-Footed Needle

Used primarily for conductive epoxies, but also used for SMD epoxy, solder paste, and other materials. Ideal for pumps that incorporate a touch probe to measure Z-height.

Underfill Needle

Features a "relieved" tip that allows the needle to be adjacent to the chip for better wicking action.

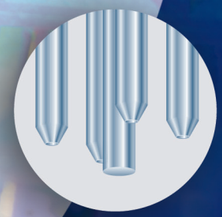


Luer-Lok Needle

Designed for surface mount epoxy, solder paste, solder mask, conductive epoxy, and a variety of other materials. Custom lengths are available.

Custom Needles

Designed for any application, such as multi-ported (right), angular configurations, special lengths, and special pattern tips.



X-Form Needle

Custom-designed for conductive epoxy dispensing in die bonding applications.

DL TECHNOLOGY®
Precision Dispensing Accessories