

ASYMTEK DV-07 Adjustable Liquid Metering Valve

Air-Actuated Adjustable Diaphragm Valve with Suckback

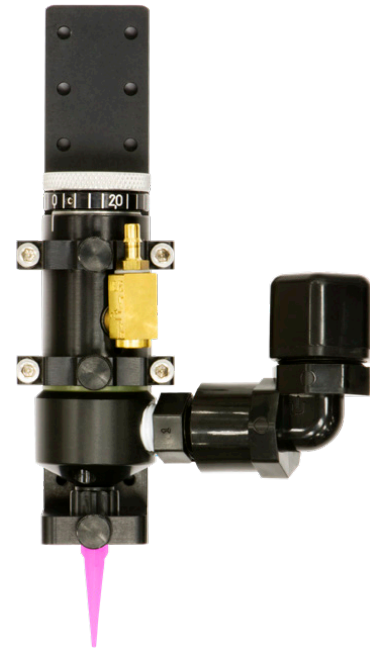
Features and Benefits

- Wide fluid compatibility handles low- to medium-viscosity fluids including aggressive chemistries
- Adjustable piston stroke provides optimal flow control
- Suckback control ensures clean cutoff and prevents dripping between dispensing cycles
- Durable construction uses chemical resistant materials for long service life
- Flexible diaphragm provides millions of dispensing cycles without wear
- Low maintenance design enables easy cleaning and reduced downtime

The DV-07 is designed for precise dispensing of low- to medium-viscosity fluids across a wide range of applications, from microdot placement to volume filling. Its carefully selected materials ensure compatibility with highly aggressive fluid formulations, including acid-based fluids, reactive adhesives such as cyanoacrylates, solvents, anaerobic compounds, and fluxes. This versatility makes the DV-07 an ideal solution for achieving optimal process flexibility and supporting evolving dispensing requirements.

To enhance dispensing performance, the DV-07 incorporates several advanced design features. An adjustable precision piston stroke provides optimal flow control, while an integrated suckback mechanism ensures positive fluid cutoff, effectively preventing dripping between dispensing cycles.

The DV-07 is a normally closed, air-actuated diaphragm valve engineered for consistent and repeatable dispensing. Its adjustable stroke design enables high response rates exceeding 500 actuations per minute. Users can further optimize performance by selecting the appropriate fluid pressure, actuation time for dot applications, or robotic speed for line dispensing, as well as choosing the correct dispense tip for precise process definition.



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A wide range of needle tips can be used with the DV-07 to support precision dispensing needs. This flexibility is achieved through a 1/4-28 UNF threaded fluid port that accommodates various needle tip adapters.

The DV-07 is built for durability and extended intervals between preventative maintenance. Its material selection prioritizes both chemical compatibility and long-term performance. The air cylinder body is precision-machined from type 303 passivated stainless steel for strength and corrosion resistance. The fluid body and sealing head/diaphragm are constructed from ultra-high-molecular-weight (UHMW) polyethylene, providing excellent durability and compatibility with demanding fluids.

For ease of maintenance, the fluid path can be quickly accessed by disassembling the lower section in just a few simple steps, allowing full access to all wetted components for efficient cleaning.

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Specifications

Size	78.5 x 26.97 mm (3.09 x 1.06 in.)
Weight	122 gm (4.3 oz.)
Fluid inlet thread	½ NPT Female
Fluid outlet thread	¼ 8 UNF
Free-flow orifice	2.54 mm (0.1 in.)
Maximum fluid pressure	483 kPa (70 psi) [4.8 bar]
Air pressure required	483-621 kPa (70-90 psi) [4.8-6.2 bar]
Diaphragm stroke	0.80 mm (0.03 in.) nominal

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Valve Construction

Piston and piston rod	Type 303 stainless steel
Cylinder body	Hard-coated aluminum
Diaphragm	UHMW polyethylene
DV-07 valve head	Acetal copolymer
DV-07 wetted parts	Acetal copolymer, UHMW polyethylene
DV-07CA valve head	UHMW polyethylene
DV-07CA wetted parts	UHMW polyethylene

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