

ASYMTEK DV-05A Diaphragm Valve

Air-Actuated Adjustable Diaphragm Poppet Valve with Suckback

Features and Benefits

- Adjustable piston stroke for precise flow control
- Integrated suckback mechanism to prevent dripping
- Normally closed, air-actuated diaphragm poppet design
- High-speed response for cycle rates >400 actuations/min
- Excellent chemical resistance and fluid compatibility
- Supports a wide range of needle and tip configurations
- Low maintenance design with easy disassembly
- The fluid body is precision-machined from type 303 passivated stainless steel for excellent corrosion resistance and long life, while the diaphragm is made from ultra-high molecular weight (UHMW) polyethylene for strength and efficient load transfer.



DV-05A Diaphragm Valve

The DV-05A valve is designed for precise dispensing of medium to medium-high viscosity fluids across a wide range of applications. Its advanced design features an adjustable piston stroke for accurate flow control, along with integrated suckback to ensure clean fluid cutoff and eliminate dripping between cycles.

Engineered for versatility, the DV-05A offers excellent chemical resistance and compatibility with a broad range of fluid formulations, providing long-term process flexibility to support evolving dispensing requirements.

The valve operates as a normally closed, air-actuated diaphragm poppet, delivering consistent and repeatable dispensing performance. Its high-speed response enables cycle rates exceeding 400 actuations per minute, ensuring maximum efficiency and precision. Users can fine-tune dispensing parameters—including fluid pressure, actuation time for dot applications, or robotic speed for continuous lines—along with appropriate tip selection to achieve optimal results.

The DV-05A supports a variety of needle configurations. A large cone-tip needle with a 1/4" NPT thread can be installed directly onto the fluid outlet for higher flow applications. For finer resolution and detailed dispense patterns, smaller needles can be used with compatible adapters.

Durability and low maintenance are central to the DV-05A design. For ease of maintenance, the lower fluid section can be quickly disassembled in just a few simple steps, allowing full access to wetted components for cleaning and servicing.

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Specifications

Size	116.3 x 29.7 mm (4.58 x 1.17 in.)
Weight	177 g (6.24 oz.)
Material input opening	1/8 FPT
Output thread	1/4 FPT
Operating frequency	400+/minute
Maximum fluid pressure	689 kPa (100 psi) [6.89 bar]
Air pressure required	414-621 kPa (60-90 psi) [4.14-6.2 bar]
Air pressure input	10-32 internal thread
Minimum mounting center distance	29.6 mm (1.17 in.)

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Valve Construction

Piston	Hard-coated aluminum
Shaft	Type 303 stainless steel
Cylinder unit	Hard-coated aluminum
Fluid chamber	Type 303 stainless steel
Valve seal/diaphragm	UHMW polyethylene

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