

# DV-07 Adjustable Liquid Metering Valve

## Air-actuated adjustable diaphragm valve

### Features and Benefits

- Accurate, reliable dispensing of low-to-medium viscosity fluids
- High chemical resistance
- Adjustable for precise flow control
- Fail-safe positive shutoff prevents valve dripping
- Flexible diaphragm provides millions of dispensing cycles without wear
- Low maintenance

The DV-07 dispenses low to medium viscosity fluids in a variety of applications from microdots to volume filling. The unique material selection makes it compatible with highly aggressive fluid formulations like acid-based fluids, reactive adhesives such as cyanoacrylates, solvents, and anaerobic and fluxes. This makes it an ideal choice to ensure optimal process flexibility for support of your future dispensing needs.

To optimize the dispensing results, the design includes unique features of adjustable precision piston stroke for flow control, as well as suck-back for positive fluid cutoff preventing dripping between dispensing.

The DV-07 is a normally closed, air-actuated diaphragm valve for consistent dispensing of low to medium viscosity fluids. Accurate dispensing is enabled through the design for adjustable stroke, resulting in high response rates well in excess of 500 actuations per minute. Furthermore, the user can select the optimal fluid pressure, actuation time for dots or robotic velocity for lines, and the appropriate dispense tip for best process definition.



A variety of needle tips can be used with this applicator for precision dispensing. This flexibility is achieved by allowing other needle tip adaptors to be installed in the fluid port using a 1/4-28 UNF thread.

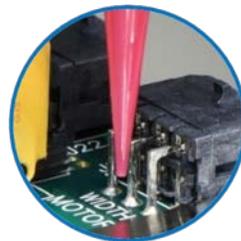
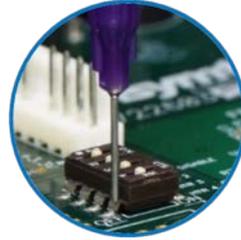
The DV-07 is designed for extensive intervals between preventative maintenance by material selection for endurance. The materials used in the design of the DV-07 have been selected to provide maximum compatibility and endurance for the various fluids used as well as to minimize preventative maintenance requirements. As such, the air cylinder body is precision machined from type 303 passivated stainless steel. For optimal fluid compatibility and high durability, the fluid body and sealing head/diaphragm is made from a very tough Ultra High Molecular Weight (UHMW) polyethylene. For cleaning of the fluid path, the lower section is disassembled in a few simple steps, allowing full access to wetted parts.

# DV-07 Adjustable Liquid Metering Valve Specifications

Size: 78.5 x 26.97mm (3.09 x 1.06 in.)  
 Weight: 122gm (4.3 oz.)  
 Fluid inlet thread: 1/8 NPT Female  
 Fluid outlet thread: 1/4-28 UNF  
 Free-flow orifice: 2.54mm (0.10 in.)  
 Maximum fluid pressure: 483kPa (70 psi) [14.8 bar]  
 Air pressure required: 483-621kPa (70-90 psi) [4.8-6.2 bar]  
 Diaphragm stroke: 0.80mm (0.03 in.) nominal

## Valve Construction

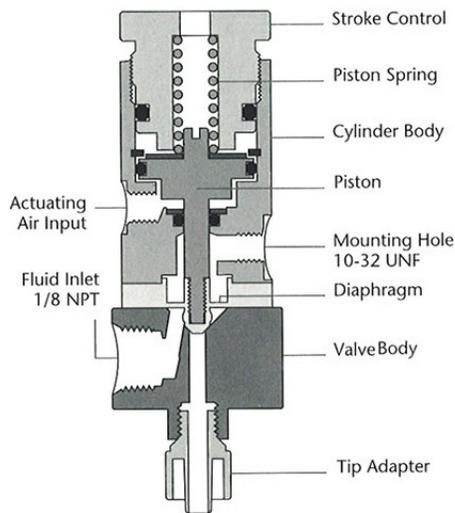
Piston and piston rod: Type 303 stainless steel  
 Cylinder body: Hard-coated aluminum  
 Diaphragm: UHMW polyethylene  
 DV-07 valve head: Acetal copolymer  
 DV-07 wetted parts: Acetal copolymer, UHMW polyethylene  
 DV-07CA valve head: UHMW polyethylene  
 DV-07CA wetted parts: UHMW polyethylene



For more information,  
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## DV-07 DIAGRAM



### North America

Headquarters  
 Carlsbad, CA

### China

Shanghai  
 Beijing  
 Guangzhou  
 Taipei

### EMEA

Deurne, Netherlands

### S.E. Asia/Australia

Singapore

### Korea

Seoul

### Japan

Tokyo

### India

Chennai

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