

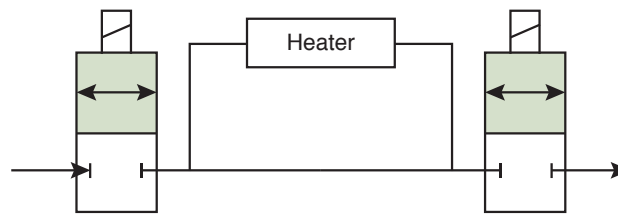
# *pneumatic* solutions

for **DIGITAL MASS FLOW CONTROLS**

In the early years of process controls, engineers were forced to rely on flow meter tubes and needle valves to control gas flows. Many applications require critical, precise variations of gas control, prompting an ever-growing need for more accurate and repeatable ways of controlling flow and/or pressure of a gas.

The first attempts at electronically controlling gases were electronic units controlled with an analog signal to a board controlling various valves. These units featured greater control when compared to the needle valves, but still had problems with accuracy. Process engineers now have more accurate, reliable solutions with advancements in flow and pressure sensors coupled with new valve technologies.

Digital Mass Flow Controllers feature microprocessor capabilities that allow for either analog or digital input, and provide analog or digital output with memory capability. Accuracy has been dramatically improved over the years—Digital and Analog Mass Flow Controllers now provide process engineers with the immediate benefit of an accuracy and repeatability to meet the demanding applications of today.



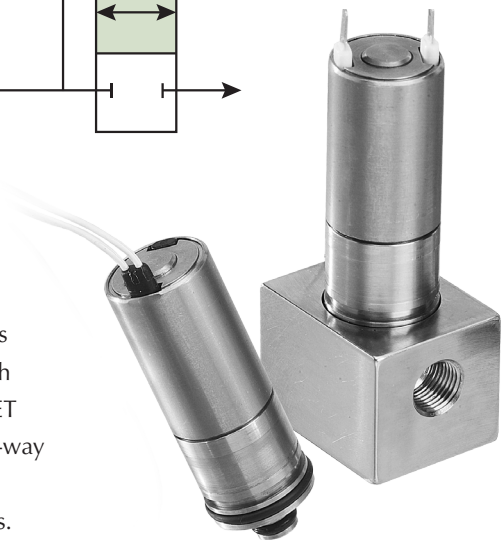
## *exceptionally long life*

Clippard has been working with mass flow control companies for years with its EV/ET series valves. Clippard EV/ET valves are precision-built in 2- and 3-way versions utilizing a unique, patented valving principle with no sliding parts. As a result, low power consumption and exceptionally long life are major benefits of this design, making them well-suited for Digital Mass Flow Controllers.

Due to the valve size and poppet movement, EV/ET series valves flow 17 l/pm at 100 psig. A booster can be added with a simple assembly process to bring the flow up to 176 l/pm.

## *higher flow*

Clippard also offers the DV Series, a powerful new valve which is built

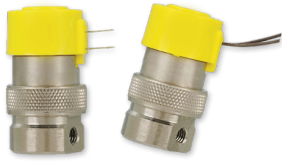


on the same valving principles as the EV/ET series valves, but is designed to flow more. The DV Series valves flow 100 l/pm at 100 psig and are available in standalone, manifold or cartridge versions.

Clippard provides engineering and application expertise to assist companies in the development of new, innovative solutions for digital mass flow control applications. For more information, visit [www.clippard.com](http://www.clippard.com) or call 877.245.6247.

# Clippard *products related to...*

## DIGITAL MASS FLOW CONTROLS



### EV Series

Clippard's EV Series valves convert low voltage, low current signals into high pressure (100 psig) pneumatic outputs. EV valves are precision-built 2-way and 3-way control valves utilizing Clippard's unique, patented valving principle with no sliding parts. Complete poppet travel is a mere 0.007", resulting in low power consumption and exceptionally long life.



### EVP Series

Clippard's EVP Series proportional control valves combine the features of the EV Series with the additional capability of proportional control. EVP valves provide air or gas flow control, and vary the output based on the current input to the solenoid. The consistent gain provides a high degree of control for advanced gas mixing.



### EM Series

At just over an inch tall and less than 3/4" in diameter, Clippard's EM Series electronic valves combine fast shifting speed and extremely high cycle life with design flexibility, making these valves the perfect solution for air and/or gas control, pilot control or any application where space is limited but desired performance is not.



### DV Series

With an impressive 100 l/pm @ 100 psig, Clippard DV Series valves provide 10 times the flow of Clippard's proven EV/ET Series! These high flow, low power, 2-way valves feature an impressive cycle life of over a billion and a solid, compact, stainless steel design. A variety of voltage, connector and mounting options are available.



### EFB Series Fill & Bleed Circuits

Clippard's EFB Series Circuits are perfect for fast prototyping of fill and bleed applications, used to inflate a volume or apparatus in one controllable function and to release or vent pressure in a second controllable function. Many variations of pre-assembled circuits are available or manifold only for specifying any Clippard valve that fits the application.



### Value-Added Services

The goal of Clippard's Value-Added Services Team is to optimize systems design, increase performance, reduce cost and allow customers to focus on their core competencies. Services include assemblies, special designs, pneumatic circuit design, control boxes, fitting & tubing harnesses, component kitting, specialized testing, KanBan services and more.

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