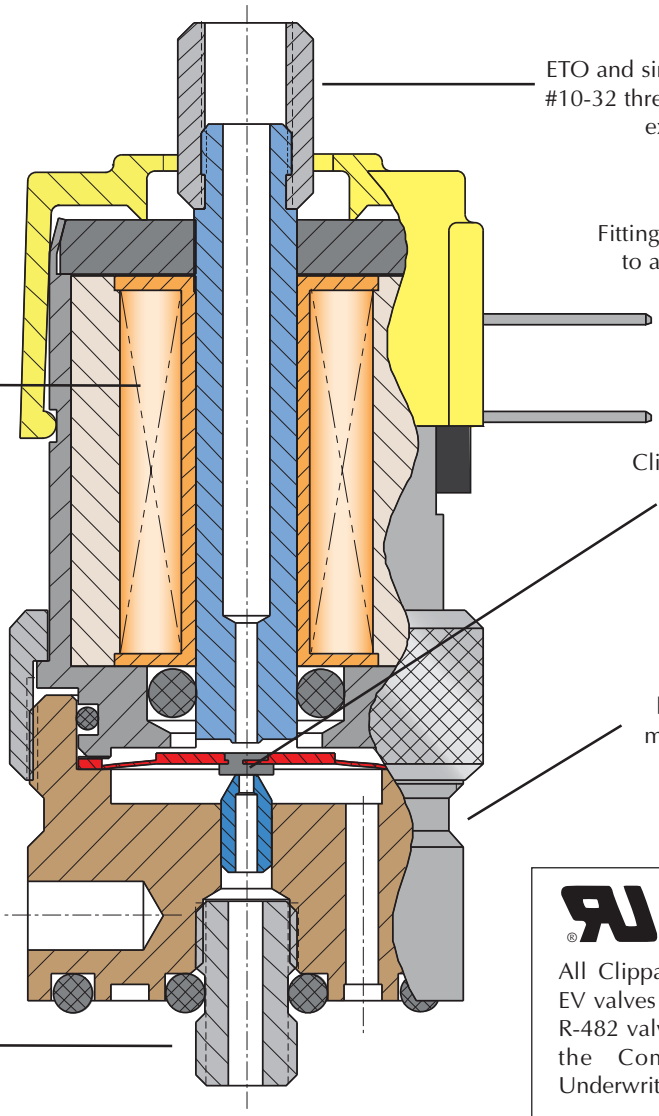
Clippard's Unique Electronic "Mouse" Valves

Clippard's Electronic Valves are quiet and quick! Valves accept low voltage, low current signals, convert them into high pressure (100 psig) pneumatic outputs. Optional low pressure/medium flow and low pressure/high flow are available.



ETO and similar styles have top #10-32 threaded fitting for N.C. exhaust or N.O. inlet.

Suggested Filtration: 40 microns or better

Fittings should be tightened to a maximum of 9 in-lb.

Low power coil uses only 0.67 watts at the rated voltage. Standard voltages include 12 and 24. Other voltages are available.

Clippard Electronic Valves are unique, with only one internal moving part that travels a mere 0.007".

Adjusting ring may be loosened for positioning to orient connections.

DO NOT REMOVE. Parts orientation will be lost and warranty voided.

Valves are small in size with a variety of mounting options. Ideal for use in biomedical, test equipment, machines, computer-directed industrial systems, and in portable devices.

Manifold mount base shown permits fast, secure mounting of electronic valves to manifolds for grouping in compact assemblies. Alternate standard model has convenient mounting holes.

All Clippard standard ET, EC and EV valves and Clippard R-481 and R-482 valves are recognized under the Component Program of Underwriters Laboratories, Inc.

File No. MH 13573

Clippard Minimatic electronic valves are precision-built 2-way or 3-way control valves, utilizing a unique, patented, valving principle. There are no sliding parts. Complete poppet travel is a mere 0.007". As a result, low power consumption and exceptionally long life are major benefits of this design.

The valves are very quiet in operation and also very cool. The valves' small size makes them well suited to a wide range of applications in biomedical, environmental test equipment, textile machines, packaging machinery, computerized industrial automation, and portable systems.

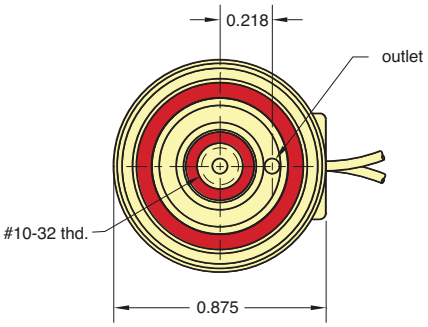
Clippard Functional Simplicity

- The design of Clippard electronic valves is a deceptively simple arrangement with a minimum of operating parts, and remarkably straight forward low power operation.
- The Clippard "spider" is the only moving part and its motion to operate the valve is a mere 0.007" travel.
- Low voltage D.C. inputs, signals from simple manual switching up to computer directed systems, move the spider in extremely fast response time . . . 5 to 10 milliseconds.
- The unit uses extremely low power (0.67 watts at the rated voltage) and is cool running. The valves are light in weight, compact in physical size and mount easily in space-saving packages.

Quick Connect

Clippard ET valves feature spade lugs for simple, quick secure low voltage connections. Wire crimp-on spade lug connectors are available separately to adapt electronic wiring where necessary. Clippard original EV type valves are available in popular voltages with 18" wire leads. The EC model utilizes a 0.025" square pin connector.

Easy Mounting



The complete line of EC, EV, ET and EW electronic valves are available with two mounting options. Standard base models have two 6-32 threaded, 7/32" deep mounting holes. Manifold models are equipped with a bottom stud, 5/32" long with #10-32 thread, which fits Clippard standard and special manifolds, accessory valves and subplates. Spanner holes in the valve body permit tightening.

CUSTOM SOLUTIONS

If you need a product that fits your application perfectly, Clippard has the capability to design or modify one of its products to suit your exact needs. We understand that a standard catalog product may be close but not be exactly what you need. Let us know YOUR need, and we will help to find YOUR Solution!

CUSTOMer solutions

Clippard's Electronic Valves are incredibly flexible from a production standpoint. Just let us know what you need.

- Custom Voltage
- Custom Flow Rate
- Custom Max Pressure/ Vacuum

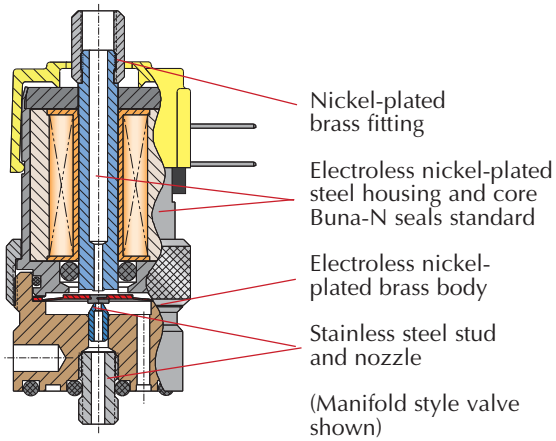
Tight Assemblies
Cartridge design is desirable for integrating valves into compact assemblies. This EVP proportional valve is calibrated to meet the customers flow range and maintain "zero" leak rate, and is incorporated into the OEM's manifold.

Clippard Integrated Solutions offer optimized pneumatic system design to increase performance, reduce cost, and make your job easier.

Standard Series

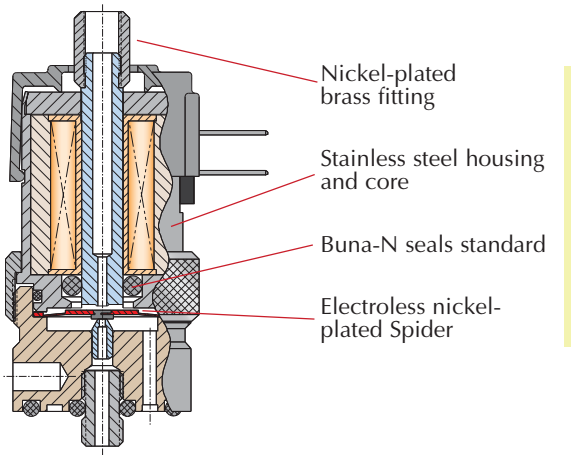
2- and 3-way manifold and in-line mounting. Normally-Closed and fully-ported versions.

Higher Flow 2-Way Version. The standard series also includes an option that provides higher flow for 2-way, Normally-Closed applications. Although manifold mounting is accomplished in the same fashion, the inlet is the annular port, and the outlet becomes the center port, through the convenient stud mount of the valve.



Corrosion-Resistant "CR-" Series

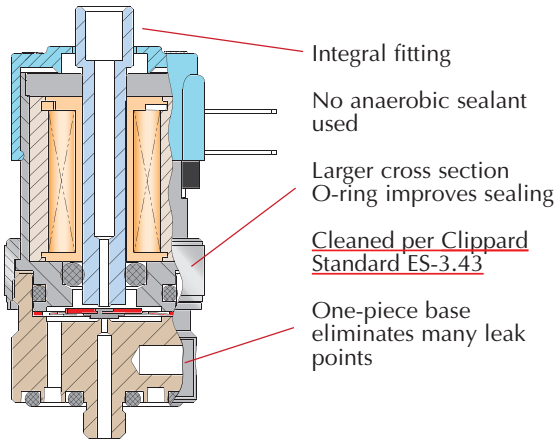
Clippard's Corrosion-Resistant Series (CR-) incorporates materials and construction that provides enhanced protection for valves used with mildly corrosive media such as moisture in air or gases. Where stainless steel is not possible, plating is incorporated to add life to wear components. A nickel-plated brass valve body is standard, but stainless steel may be substituted.



NEW! Analytical "A-" Series

Clippard's Electronic Analytical Valve (A-) series combines the proven features of the "Mouse" series with the specific needs of the analytical industry, and for applications where cleanliness is especially important. Special materials, manufacturing and assembly processes make this valve perfectly suited for applications where internal cleanliness, bubble-tight operation, and long life are imperative.

For more information, visit clippard.com/analytical

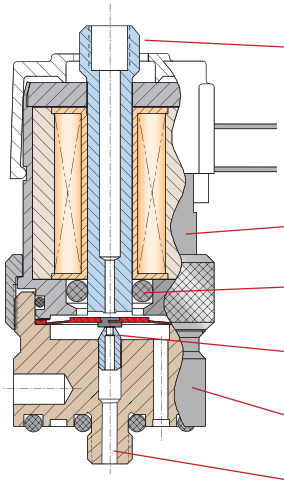


Mouse Valve Series Descriptions

Oxygen Clean "O-" Series

All EV, ET, EC and EW series electronic valves with the "O-" part number option are available manufactured and assembled for use in Oxygen-enriched environments for applications that are extremely sensitive to contamination.

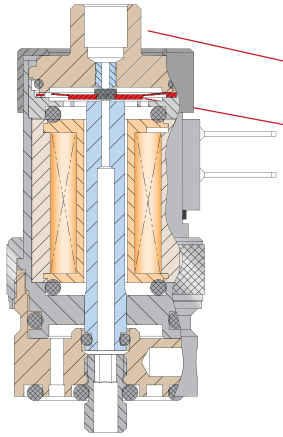
- Valves are ultrasonically cleaned, assembled, inspected and tested in an enclosed controlled area with a state-of-the-art positive pressure HEPA filtration system
- Both organic and inorganic contaminants such as particulate matter and Hydrocarbon oils are removed
- No organic sealants, adhesives or lubricants are used in the manufacturing process
- Component parts are lubricated with Oxygen-compatible PFPE (perfluoropoly ether) grease, only as needed for assembly
- Individual testing and inspection is accomplished utilizing compressed Nitrogen and ultra-violet light



For more information on the process, visit www.clippard.com/oxygen

ECN, EVN, ETN Mouse Valves

Normally-Open, manifold mount to allow Normally-Closed and Normally-Open valves on the same manifold. See page 181 for ordering information.

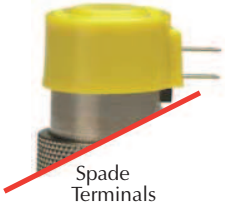


Custom EV Valves

Don't see it here? Call us! Many people shy away from asking for customized products and fear increased price and lead times. Clippard's electronic valve production consist of nealy 50% customized product. From the simple tweaks to complex challenges, Clippard is your partner for finding the right solution to your needs.

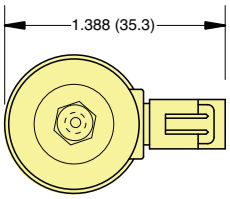
Electrical Connection Options

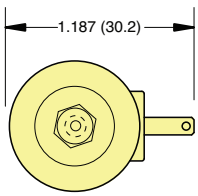

0.025″ Pin Connector

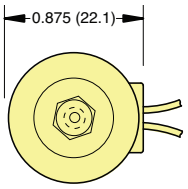

Spade Terminals

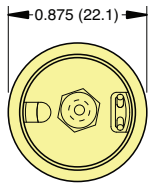

Wire Leads Side (Radial)


Wire Leads Top (Axial)



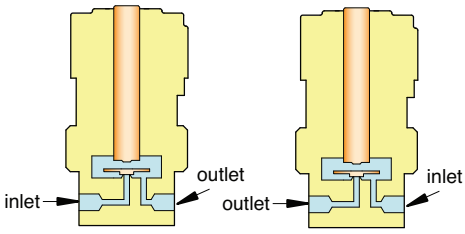






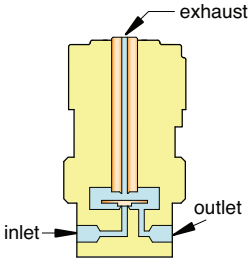
Valve Types

In-Line Mount

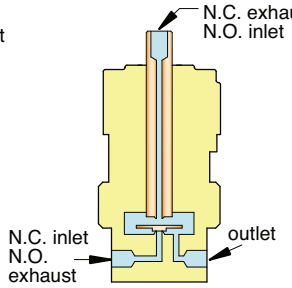


2-Way Normally-Closed In-Line Mount

2-Way Normally-Closed High Flow In-Line Mount

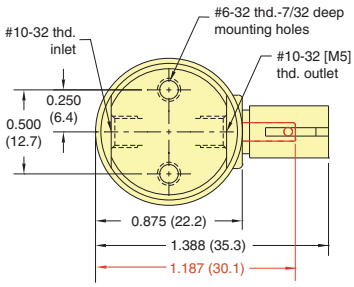


3-Way Normally-Closed In-Line Mount

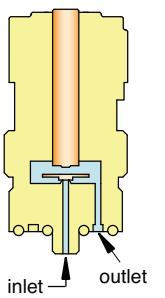


3-Way Fully-Ported In-Line Mount

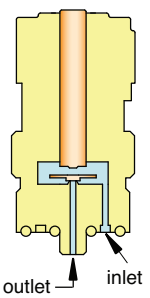
Mounting Options



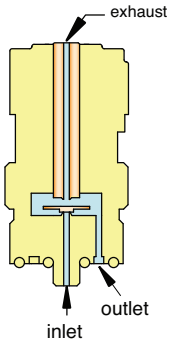
Manifold Mount



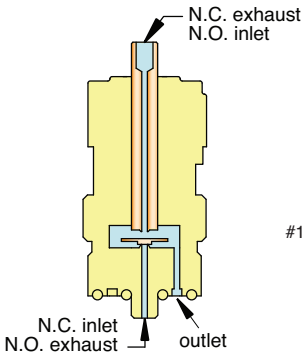
2-Way Normally-Closed Manifold Mount



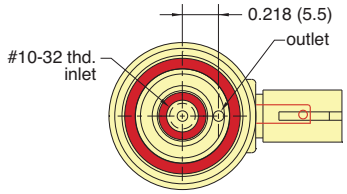
2-Way Normally-Closed High Flow Manifold Mount



3-Way Normally-Closed Manifold Mount

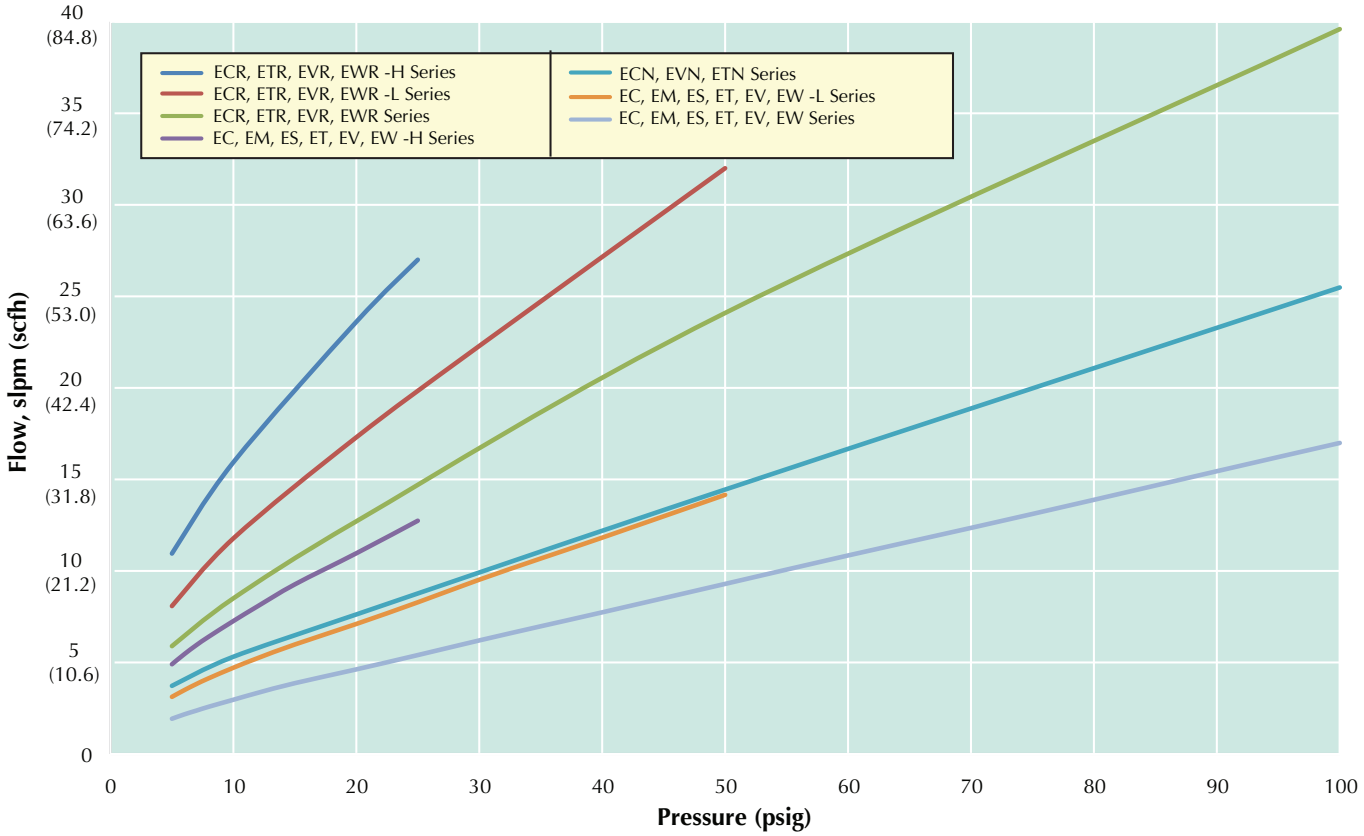


3-Way Fully-Ported Manifold Mount



Gas Flow & Electrical Specifications

Typical Air Flow



Electrical Specifications

Nominal				Power (watts)	Working Range (cont. duty)
Series	Voltage	Current (amps)	Resistance (ohms)		
- Standard - Oxygen Clean - Analytical	6	0.11	54	0.67	90 to 150% of rated voltage
	12	0.055	218		
	24	0.028	864		
- Corrosion-Resistant	12	0.098	122	1.2	90 to 110% of rated voltage
	24	0.049	486		
- EM Series - ES Series	12	0.083	144	1.0	90 to 120% of rated voltage
	24	0.042	576		