Like a mouse, this valve is quiet, quick, eats very little (0.67 watts) and is cute. 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. (The air supply should be reasonably clean and dry for optimum performance. Recommended filtration is 40 micron.)

Valve caps are of molded Hytrel®. Depending upon valve type, cap is:
- plain top on 2-way models
- with exhaust holes in cap on certain 3-way models
- with fitting, as shown, for 3-way N.O. styles for N.C. exhaust (inlet when N.O.)

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

Quick-connect spade lugs are of tinned brass and furnished on all ET models. EV models are available with 18” wire leads for popular voltages. EC models are furnished with .025” square pin connector.

Clippard Electronic Valves are unique, with only one internal moving part that travels a mere .007 inches.

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.

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 .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. No flow is needed for cooling. The valves’ small size makes them well suited to a wide range of applications in biomedical, EDP, environmental test equipment, textile machines, packaging machinery, computerized industrial automation, and portable systems.
Clippard Functional Simplicity

- The patented design of Clippard electronic valves is a deceptively simple arrangement, with a minimum of operating parts, and remarkably straightforward low power operation.
- The Clippard “spider” is the only moving part and its motion to operate the valve is a mere .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... 5-10 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 .025” square pin connector.

Easy Mount

The complete line of EC, EV, and ET 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.
THE MOUSE VALVE SERIES
EV, ET, EC SERIES VALVES

ACCESSORIES

2020/2021 High Flow Valves
Model 2020 and 2021 high flow valves are piloted 3-way valves that work with the Clippard EC, EV, and ET 3-way manifold valves. Output from the EC, EV, or ET will actuate the valve and produce output up to 22 SCFM at 100 psig. Piloted 4-way valves are also available as R-481 and R-482.

EVB-2 & EVB-3 Booster
Clippard EVB-2 & EVB-3 booster valves mate with manifold mount EC, EV, and ET valves and manifolds to provide increased flow. Direct piloting from a Clippard EC, EV and ET valve provides a flow of up to 6.1 SCFM at 100 psig.

Dual Supply Manifold
At the left is shown the 15490-3 Clippard Dual Supply Manifold with two ET-3M electronic/pneumatic interface valves. 1/8” NPT inlet is seen at the left of the manifold with the dual 10-32 port outlets at the right.

Multi-Valve Manifolds
Multi-valve manifolds are available in two lengths with either single or double (top or top and bottom) rows of outputs for versatility in application. Input to all valves mounted on this manifold is through the manifold end. Outputs are individual 10-32 ports for hose barb fittings and vinyl or urethane hose.

Pilot Manifold
Here a Clippard ET valve is mounted to the 15491-1 Clippard Pilot manifold, making it possible for the ET-3M valve controlled by an electronic signal to actuate a larger air-piloted valve or an air cylinder.

Documents Provided by Coast Pneumatics
**EV, ET, EC SERIES 2-WAY NORMALLY CLOSED VALVES**

**IN-LINE MOUNT**

**EC - 2 - ☐ - ☐**

**ET - 2 - ☐ - ☐**

**EV - 2 - ☐ - ☐**

**Type:** Normally closed 2-way

**Medium:** air (40 micron filtration)

**Temperature Range:** 30° to 180° F

**Power Consumption:** 0.67 watt

**Response:** 5 - 10 ms

**Mounting:** In-line

**Ports:** 10-32

**Operating Range:** 90% to 150% of rated voltage

**Air Flow:**
- 0.6 SCFM @ 100 psig
- “L” option - 0.5 SCFM @ 50 psig
- “H” option - 0.45 SCFM @ 25 psig

**Pressure Range:**
- 28” Hg Vac. to 105 psig
- “L” option:
  - 28” Hg Vac. to 50 psig
- “H” option:
  - 28” Hg Vac. to 25 psig

**Numbering System**

C - Connector
T - Terminal Spades
V - Wire Leads

**Standard Options:**
- Blank - Standard orifice .025
- L - 0.040 orifice (50 psig max)
- H - 0.060 orifice (25 psig max)
- V - Viton® seals

**Non-Standard Options:**
- E - EPR seals
- S - Silicon seals
- D - Diode

* Consult factory for availability of non-standard voltages and other options

**Voltages:**
- 6 - 6 Volts
- 12 - 12 Volts
- 24 - 24 Volts

Documents Provided by Coast Pneumatics
**EV, ET, EC SERIES 2-WAY NORMALLY CLOSED VALVES**

**MANIFOLD MOUNT**

**EC - 2M - □ - □**

**ET - 2M - □ - □**

**EV - 2M - □ - □**

---

**Type:** Normally closed 2-way

**Medium:** air (40 micron filtration)

**Temperature Range:** 30° to 180° F

**Power Consumption:** 0.67 watt

**Response:** 5 - 10 ms

**Mounting:** Manifold

**Ports:** Manifold mounted with 10-32 stud

**Operating Range:** 90% to 150% of rated voltage

**Air Flow:**
- 0.6 SCFM @ 100 psig
- “L” option - 0.5 SCFM @ 50 psig
- “H” option - 0.45 SCFM @ 25 psig

**Pressure Range:**
- 28” Hg Vac. to 105 psig
- “L” option: 28” Hg Vac. to 50 psig
- “H” option: 28” Hg Vac. to 25 psig

---

**NUMBERING SYSTEM**

- **E - 2 M - □ - □**

  **C** - Connector  
  **T** - Terminal Spades  
  **V** - Wire Leads

  **Standard Options:**  
  - Blank - Standard orifice .025
  - L - 0.040 orifice (50 psig max)
  - H - 0.060 orifice (25 psig max)
  - V - Viton® seals

  **Non-Standard Options:**  
  - E - EPR seals
  - S - Silicon seals
  - D - Diode

  **Voltages:**  
  - 6 - 6 Volts  
  - 12 - 12 Volts  
  - 24 - 24 Volts

  * Consult factory for availability of non-standard voltages and other options

---

Documents Provided by Coast Pneumatics
EV, ET, EC SERIES 3-WAY NORMALLY CLOSED VALVES
IN-LINE MOUNT

**Type:** Normally closed 3-way

**Medium:** air (40 micron filtration)

**Temperature Range:** 30˚ to 180˚ F

**Power Consumption:** 0.67 watt

**Response:** 5 - 10 ms

**Mounting:** In-line

**Ports:** 10-32

**Operating Range:** 90% to 150% of rated voltage

**Air Flow:**
- **“L” option:** 0.5 SCFM @ 50 psig
- **“H” option:** 0.45 SCFM @ 25 psig

**Pressure Range:**
- **“L” option:** 28” Hg Vac. to 50 psig
- **“H” option:** 28” Hg Vac. to 25 psig

**Numbering System**
- **C** - Connector
- **T** - Terminal Spades
- **V** - Wire Leads

**Standard Options:**
- Blank - Standard orifice .025
- **H** - 0.060 orifice (25 psig max)
- **V** - Viton® seals

**Non-Standard Options:**
- **E** - EPR seals
- **S** - Silicon seals
- **D** - Diode

**Voltages:**
- 6 - 6 Volts
- 12 - 12 Volts
- 24 - 24 Volts

* Consult factory for availability of non-standard voltages and other options.
**EV, ET, EC SERIES 3-WAY NORMALLY CLOSED VALVES**

**Type:** Normally closed 3-way

**Medium:** air (40 micron filtration)

**Temperature Range:** 30˚ to 180˚ F

**Power Consumption:** 0.67 watt

**Response:** 5 - 10 ms

**Mounting:** Manifold

**Ports:** Manifold mounted with 10-32 stud

**Operating Range:** 90% to 150% of rated voltage

**Air Flow:**
- 0.6 SCFM @ 100 psig
- “L” option - 0.5 SCFM @ 50 psig
- “H” option - 0.45 SCFM @ 25 psig

**Pressure Range:**
- “L” option: 28” Hg Vac. to 50 psig
- “H” option: 28” Hg Vac. to 25 psig

**Numbering System**

- **E** - Connector
- **T** - Terminal Spades
- **V** - Wire Leads

**Standard Options:**
- Blank - Standard orifice .025
- L - 0.040 orifice (50 psig max)
- H - 0.060 orifice (25 psig max)
- V - Viton® seals

**Non-Standard Options:**
- E - EPR seals
- S - Silicon seals
- D - Diode

* Consult factory for availability of non-standard voltages and other options

**Voltages:**
- 6 - 6 Volts
- 12 - 12 Volts
- 24 - 24 Volts

*Documents Provided by Coast Pneumatics*
Type: Normally open 2-way
Medium: air (40 micron filtration)
Temperature Range: 30˚ to 180˚ F
Power Consumption: 0.67 watt
Response: <15 ms
Mounting: Manifold
Ports: Manifold mounted with 10-32 stud
Operating Range: 90% to 150% of rated voltage
Air Flow: 0.9 SCFM@100 psig
Pressure Range: 28” Hg Vac. to 105 psig

ECN, ETN & EVN series valves are 2 & 3-way N.O. solenoid valves. The normally open inlet is through the center mounting stud, so the valves can be supplied directly from the manifold without external tubing.

**NUMBERING SYSTEM**

<table>
<thead>
<tr>
<th>E</th>
<th>V</th>
<th>N</th>
<th>-</th>
<th>2</th>
<th>M</th>
<th>-</th>
<th>-</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>T</td>
<td>V</td>
<td>-</td>
<td>Connector</td>
<td>Terminal Spades</td>
<td>Wire Leads</td>
<td></td>
</tr>
</tbody>
</table>

Standard Options:
- Blank - Buna-N seals
- V - Viton® seals

* Consult factory for availability of non-standard voltages and other options

Voltages:
- *6* - 6 Volts
- 12 - 12 Volts
- 24 - 24 Volts

Non-Standard Options:
- E - EPR seals
- D - Diode
ECN, ETN & EVN series valves are 2 & 3-way N.O. solenoid valves. The normally open inlet is through the center mounting stud, so the valves can be supplied directly from the manifold without external tubing.
Type: Fully ported 3-way

Medium: air (40 micron filtration)

Temperature Range: 30° to 180° F

Power Consumption: 0.67 watt

Response: 5 - 10 ms

Mounting: In-line

Ports: 10-32

Operating Range: 90% to 150% of rated voltage

Air Flow: 0.6 SCFM @ 100 psig*

“L” option - 0.5 SCFM @ 50 psig

“H” option - 0.45 SCFM @ 25 psig

* When air supply is connected to the top port to operate valve normally open, main flow is 0.9 scfm and exhaust flow is 0.6 scfm at 100 psig.

Pressure Range:

- 28” Hg Vac. to 105 psig
- “L” option: 28” Hg Vac. to 50 psig
- “H” option: 28” Hg Vac. to 25 psig

Standard Options:

- Blank - Standard orifice .025
- L - 0.040 orifice (50 psig max)
- H - 0.060 orifice (25 psig max)
- V - Viton® seals

Non-Standard Options:

- E - EPR seals
- S - Silicon seals
- D - Diode

* Consult factory for availability of non-standard voltages and other options.
**Type:** Fully ported 3-way  
**Medium:** air  
**Temperature Range:** 30° to 180° F  
**Power Consumption:** 0.67 watt  
**Response:** 5 - 10 ms  
**Mounting:** Manifold  
**Ports:** Manifold mounted with 10-32 stud  
**Operating Range:** 90% to 150% of rated voltage  

**Air Flow:**  
- 0.6 SCFM @ 100 psig*  
- “L” option - 0.5 SCFM @ 50 psig  
- “H” option - 0.45 SCFM @ 25 psig  

*When air supply is connected to the top port to operate valve normally open, main flow is 0.9 scfm and exhaust flow is 0.6 scfm at 100 psig.

**Pressure Range:**  
- 28” Hg Vac. to 105 psig  
- “L” option: 28” Hg Vac. to 50 psig  
- “H” option: 28” Hg Vac. to 25 psig  

**Standard Options:**  
- Blank - Standard orifice .025  
- L - 0.040 orifice (50 psig max)  
- H - 0.060 orifice (25 psig max)  
- V - Viton® seals  

**Non-Standard Options:**  
- E - EPR seals  
- S - Silicon seals  
- D - Diode  

*Consult factory for availability of non-standard voltages and other options.
**ET PILOTED 4-WAY VALVES**

**R-481**

For more information please see page 286 in the Modular Valve section of this catalog.

- **Type:** 4-way combination electronic and modular spool type interface valve. Fully ported ET-3 & R401 hybrid
- **Medium:** air, water, or oil; pilot - air only
- **Input Pressure:** pilot - 45 psig minimum working - 0-150 psig
- **Air Flow:** valve @100 psig - 10 scfm
- **Voltages:**
  - R-481-6 6VDC
  - R-481-12 12VDC
  - R-481-24 24VDC
- **Mounting:** Uses Octoport base and two captivated screws
- **Ports:** valve has patented Octoport system

**R-482**

For more information please see page 286 in the Modular Valve section of this catalog.

- **Type:** 4-way combination electronic and modular spool type interface valve. Fully ported ET-3 & R402 hybrid
- **Medium:** air, water, or oil; pilot - air only
- **Input Pressure:** pilot - 45 psig minimum working - 0 to 150 psig
- **Air Flow:** valve @100 psig - 10 scfm
- **Voltages:**
  - R-482-6 6VDC
  - R-482-12 12VDC
  - R-482-24 24VDC
- **Mounting:** Uses Octoport base and two captivated screws
- **Ports:** valve has patented Octoport system

**ET-C48 ET-C120**

Black molded lug connectors are available for easy push on connection. ET-C48 is 48” in length, ET-C120 is 120” in length.

**3831**

Insulated crimp-on spade lug connectors are available for wiring up leads to connect electronic circuit to ET style valves. Accepts #22, #24, or #26 wire

**C2-RB18**

AMP connector #102999-1 with 18” wire leads for EC/ECO and EI/EIO valves

Note: Supply pressure must be applied to both ports 1 & 4. Minimum pressure on port 4 should be 40 psi.

For more information please see page 286 in the Modular Valve section of this catalog.
**EVB-2**

**Type**: 2-way normally closed, pressure piloted valve  

**Medium**: air  

**Input Pressure**: 20 to 150 psig  

**Air Flow**: 6.1 scfm @ 100 psig  

**Response**: 20 ms at 20 psig, 13 ms at 100 psig  

**Mounting**: Mounts to manifold  

**Ports**: Inlet and outlet through manifold  

**Materials**: Nickel plated brass, acetyl, stainless steel and Buna-N

**Additional Note**: Use only normally closed 3-way pilot valves in conjunction with EVB-2.

**EVB-3**

**Type**: 3-way normally closed, pressure piloted valve  

**Medium**: air  

**Input Pressure**: 20 to 150 psig  

**Air Flow**: 6.1 scfm @ 100 psig  

**Response**: 20 ms at 20 psig, 13 ms at 100 psig  

**Mounting**: Mounts to manifold  

**Ports**: Inlet and outlet through manifold  

**Materials**: Nickel plated brass, acetyl, stainless steel and Buna-N

**Additional Note**: Use only normally closed 3-way pilot valves in conjunction with EVB-3.

**2013 - ❑**

**Type**: 3-way normally closed, electronic valve  

**Medium**: air  

**Input Pressure**: 30 to 100 psig  

**Air Flow**: 22 scfm at 100 psig  

**Bleed Flow**: 0.10 scfm @ 100 psig  

**Filtration**: 10 micron  

**Frequency Response**: 50 Hz @ 100 psig, 70 Hz @ 30 psig  

**Ports**: 1/8” NPT female  

**Switching Speed**: 10 ms.

**Electrical Data**  

- **Continuous Overload**: 350% @ 25°C ambient, 250% @ 50°C ambient  
- **Power Consumption**: Less than .50 watts at rated voltage (80 ma. @ 6V, 40 ma. @ 12V, 20 ma. @ 24V)  
- **Leads**: 28 gauge stranded P.V.C. insulated  
- **Standard Options**: 2013-6 6 volts DC, 2013-12 12 volts DC, 2013-24 24 volts DC
High Flow EC, EV, and ET Piloted 3-way valves

Designed to be piloted by a Clippard EC, EV and ET manifold mount electronic valve. Output from the EC, EV and ET actuates the valve to produce outputs up to 22 scfm at 100 psig. Combines low wattage, long life and cool running of the EC, EV and ET valves with quick response and high flow of Clippard “Fluidamp” type valves. The 2020 and 2021 are identical in all respects except one. The 2020 has an external 10-32 port for the pressure supply to the EC, EV and ET electronic pilot valve.

Type: 3-way normally closed, pressure piloted valve

Medium: air

Input Pressure: 30 to 100 psig

Pilot Pressure: (2020) 60% of supply pressure, minimum

Air Flow: 22 scfm at 100 psig

Response: approx. 20 ms

Mounting: Mounting holes provided

Ports: Inlet and outlet, exhaust 1/8” NPT

Pilot supply on 2020 is 10-32 female

Materials: Anodized Aluminum, Stainless Steel and Buna-N

Additional Note: Use only normally closed 3-way pilot valves in conjunction with 2020/2021

15490-1 Pilot manifold allows, EC, EV, and ET, controlled by electronic signal, to pilot through 1/8” NPT outlet a much larger air-piloted valve.

15490-2 Single supply manifold with 1/8” NPT inlet securely connected to air source, manifold provides rigid mounting for EC, EV and ET valve, 10-32 port outlet.

15490-3 Dual supply manifold allows two EC, EV or ET 3-way valves to be used as a 4-way by controlling them with a single pole double throw switch.

15491-1 Valve pilot adaptor may be used with a pneumatic cylinder to provide a complete system for efficient interface with electric or electronic circuits. This adaptor may be installed in any 1/8” NPT port and with supply air connected to the inlet port, provide air to a single acting cylinder when an electronic signal is received.

15491-2 Inline manifold may be installed in any 1/8 NPT supply port and provides rigid mounting for an EC, EV or ET valve with a #10-32 threaded outlet port. With this manifold, an EC, EV, or ET valve controlled by an electronic signal, can pilot a much larger air-piloted valve through a #10-32 threaded outlet port.
Multi-Valve Manifolds

15481-4
Mounts four valves on one side only

15481-6
Mounts six valves on one side only

15482-8
Mounts eight valves, four each on opposite sides

15482-12
Mounts twelve valves, six each on opposite sides

Construction: Black anodized aluminum

Eight ET valves mounted on a 15482-8
MODELS OFFERED

- **EV-2M** Normally Closed
- **EV-3M** Normally Closed
- **EVO-3M** Normally Closed
- **EVO-3M** Normally Open
- **EVO-3** Normally Closed
- **EVO-3** Normally Open
- **EVO-3** as Diverter

**EVN-2M** Normally Open
**EVN-3M** Normally Open
**EV-2** Normally Closed
**EV-3** Normally Closed
**EVO-3** as Diverter

*0-105 psig* 0-28" hg vac