EVP Series Proportional Control Valves

EVP Series Proportional Control Valves

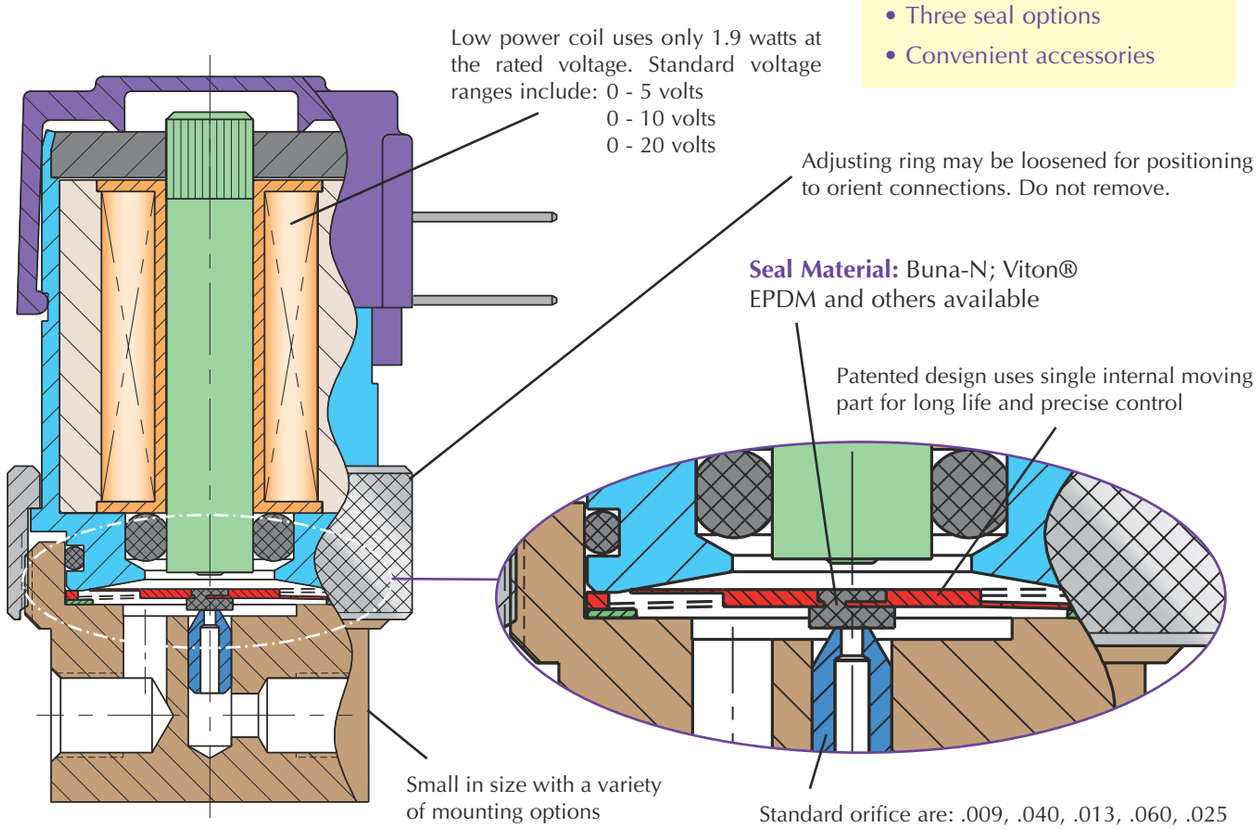
Clippard is pleased to add the EVP series proportional control valve to our electronic product line. This product combines the features of the existing EV series valve - long life, low power, and Clippard's reputation for high quality components - with the additional capability for proportional control.

The EVP series valve provides air or gas flow control, and varies the output flow based on the current input to the solenoid. The consistent gain (see chart) of this valve provides a high degree of control for many applications.

Controllability and overall value are the main features of the EVP Proportional Valve series. The valve may be controlled using DC current, open or closed-loop control, and even PWM (pulse width closed-loop control, to cover a broad range of applications.

Features

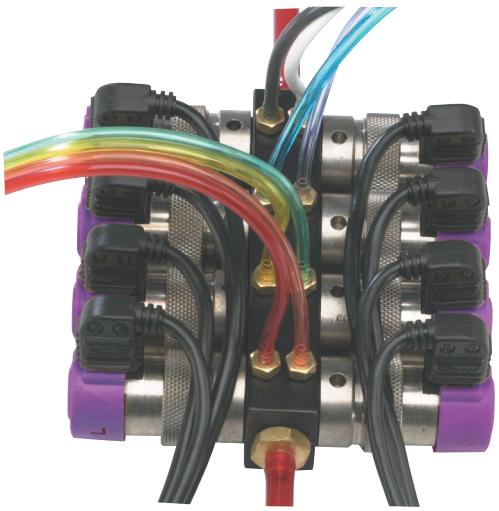
- Fast response
- Long life
- Small package
- Single moving part - low friction and wear
- Five orifice sizes
- Three voltage ranges
- Three connection styles
- Two mounting types
- Three seal options
- Convenient accessories

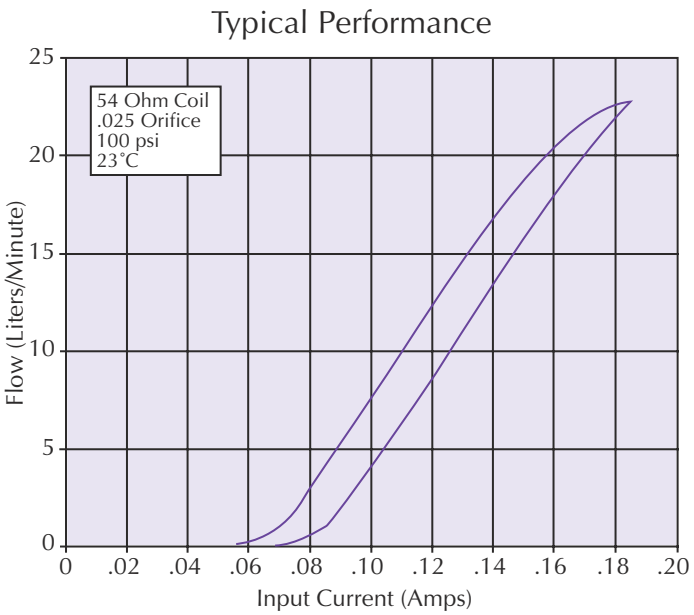


Designed For:

- Analytical Instruments
- Blood pressure monitoring
- Precise pressure control
- Dialysis
- Automotive
- Gas Controllers
- Mass Flow Control
- Patient Simulators
- Gas Chromatography
- Respirators / Ventilators
- Semiconductor - CMP

and many more...





Type: 2-way, Proportional

Medium: Air, Inert Gasses

Temperature Range: 32˚ to 120˚ F (0˚ to 50˚ C)

Power Consumption: 1.9 watts at 23˚C 2.3 watts max.

Mounting: In-line or Manifold

Ports: 10-32 Female (In-line)
10-32 Male Stud (Manifold)

Seal Material: Buna-N; Viton® EPDM and others available

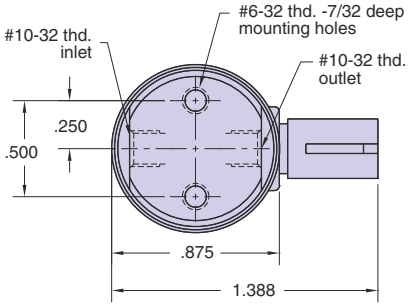
Maximum Hysteresis: 10% of full current

Orifice Diameter	Rated Pressure	Flow at Max. Current (±10%)
0.009 "	100 psig	2.7 slpm / 5.7 scfh
0.013"	100 psig	6.7 slpm / 14.2 scfh
0.025"	100 psig	23.5 slpm / 50.0 scfh
0.040"	50 psig	19.0 slpm / 40.0 scfh
0.060"	25 psig	14.0 slpm / 30.0 scfh

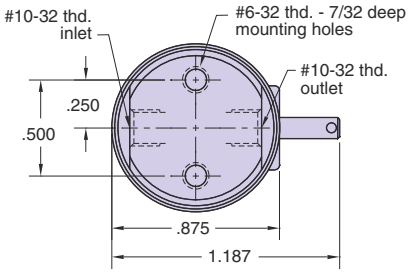
Nominal Voltage Range at 23˚C	Input Current Range	Coil Resistance at 23˚C	Max. Voltage Required
0 - 5 vdc	0 - 0.370 amps	13.5 ohms	6.2 vdc
0 - 10 vdc	0 - 0.185 amps	54 ohms	12.4 vdc
0 - 20 vdc	0 - 0.093 amps	218 ohms	24.8 vdc

EVP Series Proportional Control Valves
In-line Mount

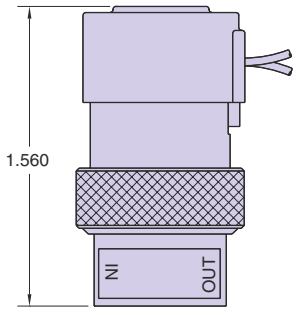
EC - P - ❑ - ❑ ❑ - ❑



ET - P - ❑ - ❑ ❑ - ❑



EV - P - ❑ - ❑ ❑ - ❑



Type: 2-way, Proportional

Medium: air, Inert Gasses

Temperature Range: 32˚ to 120˚ F (0˚ to 50˚ C)

Power Consumption: 1.9 watts at 23˚C 2.3 watts max.

Mounting: In-line

Ports: 10-32 Female

Orifice Diameter (in.)	Rated Pressure (psi)	Flow at Max. Current (scfh)
0.009	100	5.7±10%
0.013	100	14.2±10%
0.025	100	50.0±10%
0.040	50	40.0±10%
0.060	25	30.0±10%

Nominal Voltage Range at 23˚C (vdc)	Input Current Range (amps)	Coil Resistance at 23˚C (ohms)	Max. Voltage Required (vdc)
0 - 5	0 - .370	13.5	6.2
0 - 10	0 - .185	54	12.4
0 - 20	0 - .092	218	24.8

The EVP Proportional Valve can be calibrated for pressures less than the maximum shown here. Lower pressures may be substituted, and will be used for calibration. The pressures shown above are standard options. For pressures less than 10 psig, please consult factory.

NUMBERING SYSTEM

E ❑ - P - ❑ - ❑ ❑ - ❑

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

Voltages: *
- **05** - 0-5 VDC
- **10** - 0-10 VDC
- **20** - 0-20 VDC

Orifice Options: § / **Maximum Pressure: §**
- **09** - .009 dia. → **25** - 25 psig, **50** - 50 psig, **A0** - 100 psig
- **13** - .013 dia. → **25** - 25 psig, **50** - 50 psig, **A0** - 100 psig
- **25** - .025 dia. → **25** - 25 psig, **50** - 50 psig, **A0** - 100 psig
- **40** - .040 dia. → **25** - 25 psig, **50** - 50 psig
- **60** - .060 dia. → **25** - 25 psig

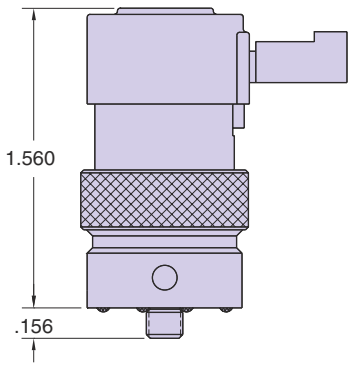
Options:
- **Blank** - none
- **E** - EPDM
- **V** - Viton® seals

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

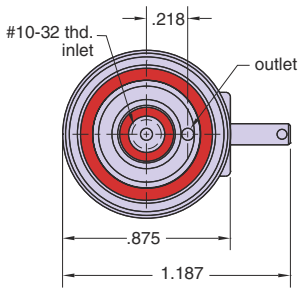
§ Standard Orifice Configurations
09A0 13A0 25A0
4050 6025

Sample part number:
EC-P-10-25A0

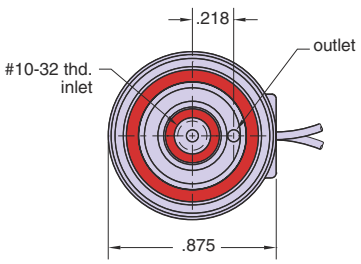
EC - PM - ❑ - ❑ ❑ - ❑



ET - PM - ❑ - ❑ ❑ - ❑



EV - PM - ❑ - ❑ ❑ - ❑



Type: 2-way, Proportional

Medium: air, Inert Gasses

Temperature Range: 32˚ to 120˚ F (0˚ to 50˚ C)

Power Consumption: 1.9 watts at 23˚C 2.3 watts max.

Mounting: Manifold

Ports: 10-32 male stud

Orifice Diameter (in.)	Rated Pressure (psi)	Flow at Max. Current (scfh)
0.009	100	5.7±10%
0.013	100	14.2±10%
0.025	100	50.0±10%
0.040	50	40.0±10%
0.060	25	30.0±10%

Nominal Voltage Range at 23˚C (vdc)	Input Current Range (amps)	Coil Resistance at 23˚C (ohms)	Max. Voltage Required (vdc)
0 - 5	0 - .370	13.5	6.2
0 - 10	0 - .185	54	12.4
0 - 20	0 - .092	218	24.8

The EVP Proportional Valve can be calibrated for pressures less than the maximum shown here. Lower pressures may be substituted, and will be used for calibration. The pressures shown above are standard options. For pressures less than 10 psig, please consult factory.

NUMBERING SYSTEM

E ❑ - **P M** - ❑ - ❑ ❑ - ❑

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

05 - 0-5 VDC
10 - 0-10 VDC
20 - 0-20 VDC

Orifice Options: §
- **09** - .009 dia.
- **13** - .013 dia.
- **25** - .025 dia.
- **40** - .040 dia.
- **60** - .060 dia.

Maximum Pressure: §
- **25** - 25 psig
- **50** - 50 psig
- **A0** - 100 psig

Options:
- **Blank** - none
- **E** - EPDM
- **V** - Viton® seals

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

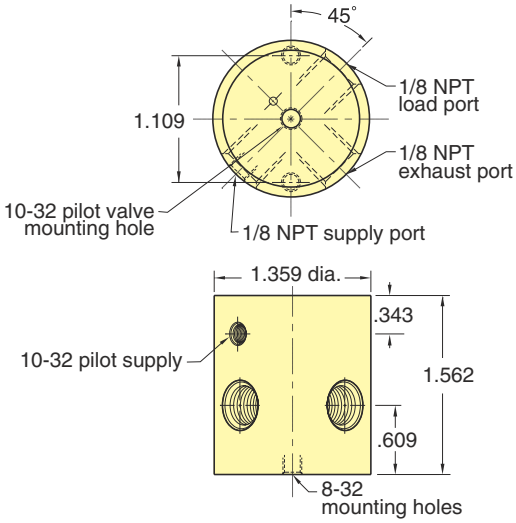
§ Standard Orifice Configurations
09A0 13A0 25A0
4050 6025

Sample part number:
EC-PM-10-25A0

2020/2021

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

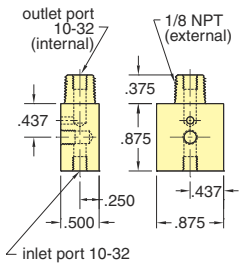
1549❑ - ❑

Specialized Manifolds

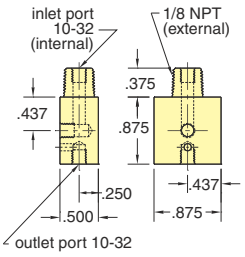
Material: Nickel plated brass

Ports: 1/8" NPT thread stud, 10-32 body ports

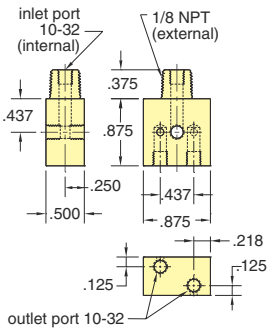
15490-1 Pilot manifold allows, EC, EV, and ET, controlled by electronic signal, to pilot through 1/8" NPT outlet a much larger air-piloted valve.



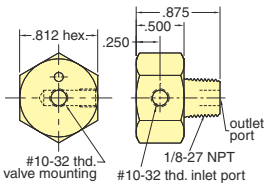
15490-2 Single supply manifold with 1/8" NPT inlet securely connected to air source, manifold provides rigid mounting for EC, EV and ET valve, 10-32 port outlet.



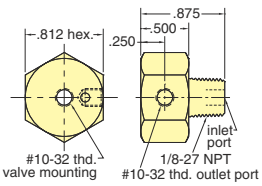
15490-3 Dual supply manifold allows two EC, EV or ET 3-way valves to be used as a 4-way by controlling them with a single pole double throw switch.



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.



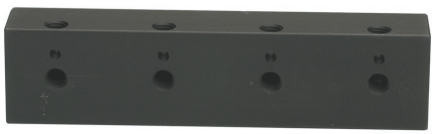
15491-2 Inline manifold may be installed in any 1/8 NPT supply port and provides rigid mounting for an EC, EV, or ET valve with a #10-32 threaded outlet port. With this manifold, an EC, EV, or ET valve controlled by an electronic signal, can pilot a much larger air-piloted valve through a #10-32 threaded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

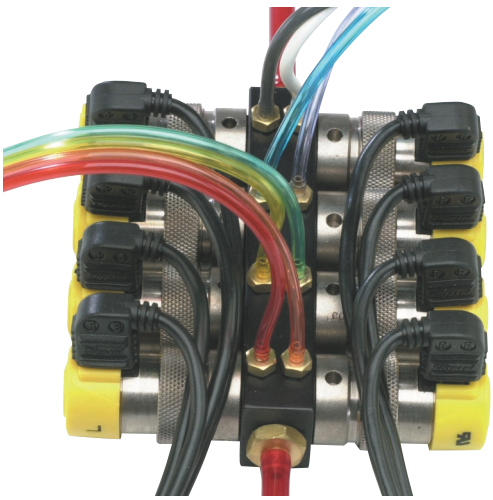


1548 ❑ - ❑

Multi-Valve Manifolds

Construction: Black anodized aluminum

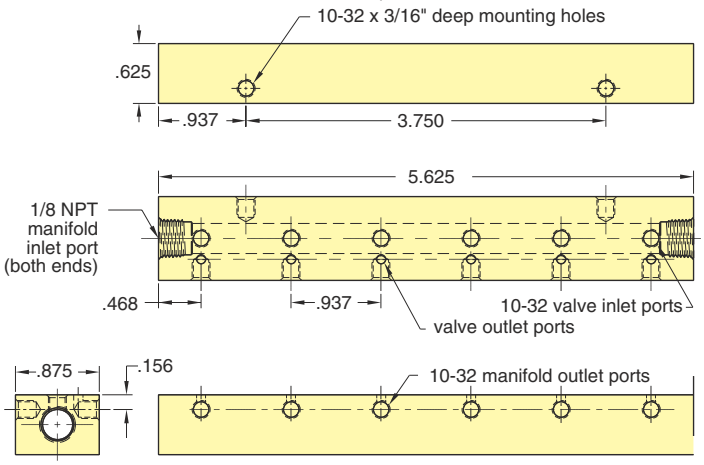




Eight ET valves mounted on a 15482-8

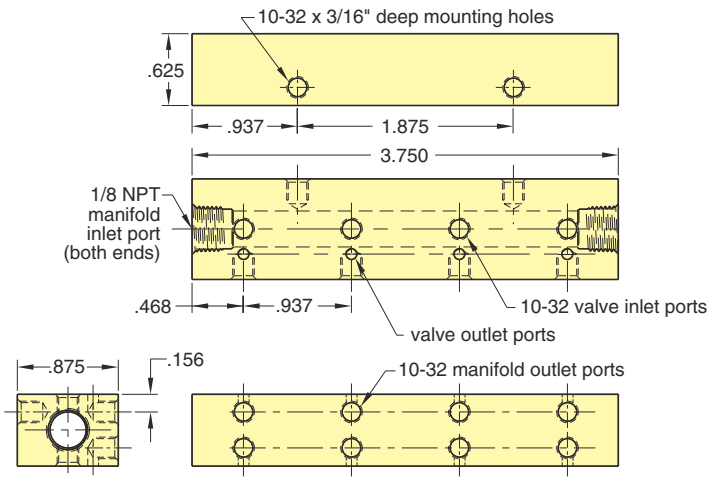
15481-6

Mounts six valves on one side only



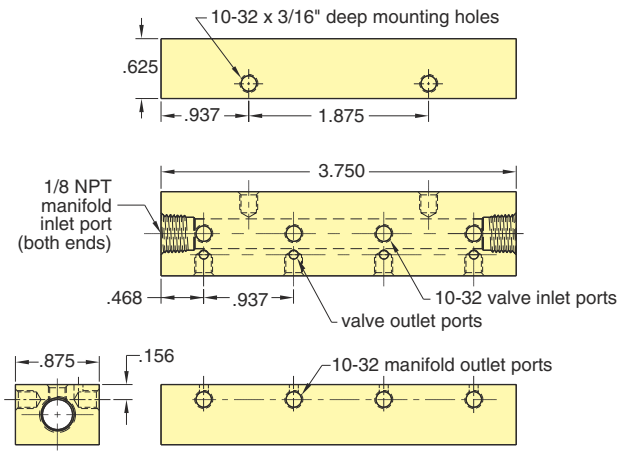
15482-8

Mounts eight valves, four each on opposite sides



15481-4

Mounts four valves on one side only



15482-12

Mounts twelve valves, six each on opposite sides