

EVP PROPORTIONAL VALVES

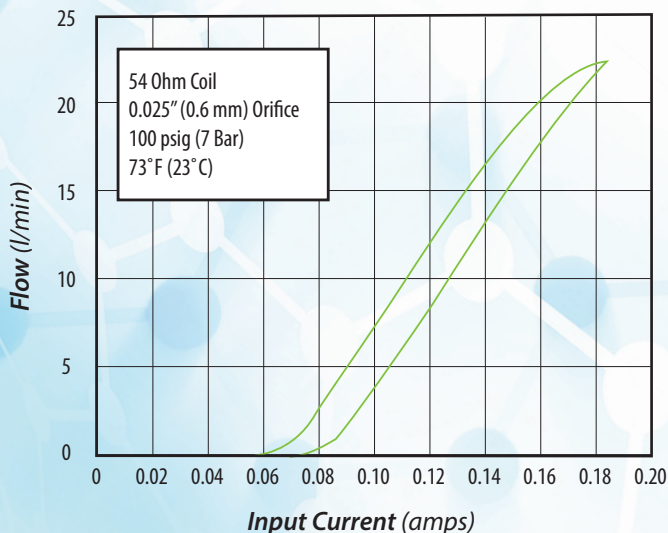


The EVP series proportional control valves combine the features of the existing EV series valve—long life, low power, and Clippard’s reputation for high quality components—with the additional capability for proportional control. The EVP series valve provides air or gas flow control and varies the output flow based on the current input to the solenoid.

Controllability and overall value are the main features of the EVP proportional valve series. The consistent gain of this valve provides a high degree of control for many applications. The valve may be controlled using DC current, open or closed-loop control, and even PWM (pulse width modulation) to cover a broad range of applications.

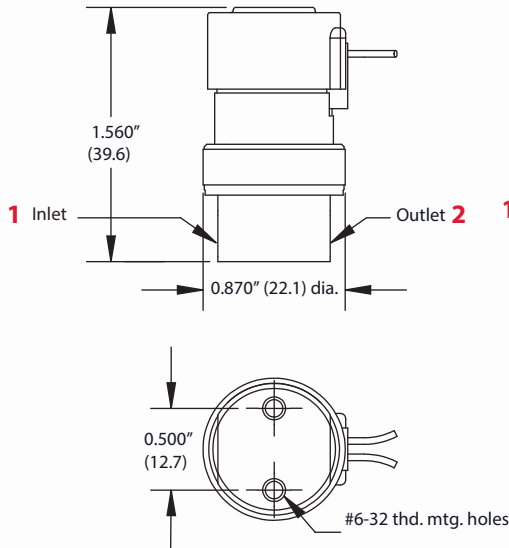
Coil Resistance	13.5, 54, 218 Ω @ 72°F (22°C)
Connection	Square pin, terminal spades, or 18" (45.7 cm) wire leads
Current	0 to 0.370 A, 0 to 0.185 A, 0 to 0.092 A
Driver	EVPD (optional)
Filtration	40 micron filter (recommended)
Flow Range	Up to 22 l/min
Function	2-way normally-closed proportional
Material, Body	Nickel plated brass
Material, Seals	Nitrile, FKM, or EPDM
Material, Seat	Stainless steel
Material, Wetted	ENP brass, ENP steel, stainless steel
Max. Flow	$\pm 10\%$ of target flow
Max. Hysteresis	$\leq 10\%$ of full current
Max. psig	100 psig (7 bar)
Medium	Clean, dry air or inert gases
Mount	In-line threaded ports or manifold
Number of Ports	2
Operating Pressure	Vac. to 100 psig (0.3 to 7 bar)
Operating Temp. Range	32 to 120°F (0 to 48°C)
Orifice	0.009", 0.013", 0.025", 0.040", 0.060" (0.23, 0.33, 0.64, 1.00, 1.52 mm)
Port, Inlet	#10-32 female or manifold stud
Port, Outlet	#10-32 female or manifold outlet hole
Power Requirement	1.9 watts @ 72°F (22°C); 2.3 watts max.
Voltage	5, 10, or 20 VDC nominal
Wattage	1.9 watts @ 72°F (22°C), 2.3 watts max.
More Details	clippard.com/link/evp-series

Typical Performance

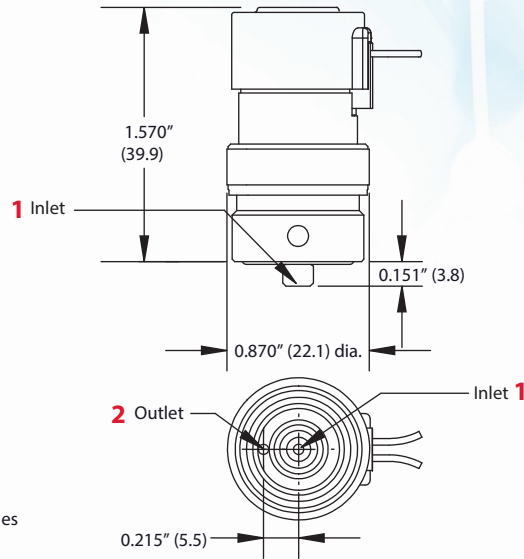


The above flow curve is a typical calibration record for the EVP. All proportional valves have a stored calibration data sheet readily available upon request.

Inline Mount



Manifold Mount



Manifolds

15490-1	Pilot Manifold #10-32 Inlet, 1/8" NPT Outlet
15490-2	Single Supply 1/8" NPT Inlet, #10-32 Outlet
15490-3	Dual Supply 1/8" NPT Inlet, #10-32 Outlet
15491-1	Side-Ported #10-32 Inlet, 1/8" NPT Outlet
15491-2	Side-Ported 1/8" NPT (R1/8) Inlet, #10-32 Outlet
15490-5	Single-Station 1/8" NPT Inlet, 1/8" NPT Outlet
15481-2	Single-Sided 2-Station
15481-4	Single-Sided 4-Station
15481-6	Single-Sided 6-Station
15482-8	Double-Sided 8-Station
15482-12	Double-Sided 12-Station

Dimensions shown are in inches (millimeters listed in parentheses).
Visit clippard.com for more detailed 2D and 3D drawings.

- Flow proportional to input current
- Fast response and long life

ORDERING INFORMATION

E - **P** - **05** - **09** - **00**

Electrical Connection

- C Connector
- T Terminal Spades
- V Wire Leads

Mounting

- (blank) Base Mount
- M Manifold Mount

Voltage

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

Seal

- (blank) Nitrile
- E EPDM¹
- V FKM¹

Orifice*

- 09 0.009" (0.23) dia., 2.7 l/min ±10%, max. 100 psig (7 bar)
- 13 0.013" (0.33) dia., 6.7 l/min ±10%, max. 100 psig (7 bar)
- 25 0.025" (0.64) dia., 22.0 l/min ±10%, max. 100 psig (7 bar)
- 40 0.040" (1.02) dia., 18.7 l/min ±10%, max. 50 psig (3.4 bar)
- 60 0.060" (1.52) dia., 14.0 l/min ±10%, max. 25 psig (1.7 bar)

Maximum Pressure (5 psig to 100 psig)

- 00 In increments of 5, from 05 to 95
- A0 100 psig

¹Min. order quantity required for EPDM or FKM seals.

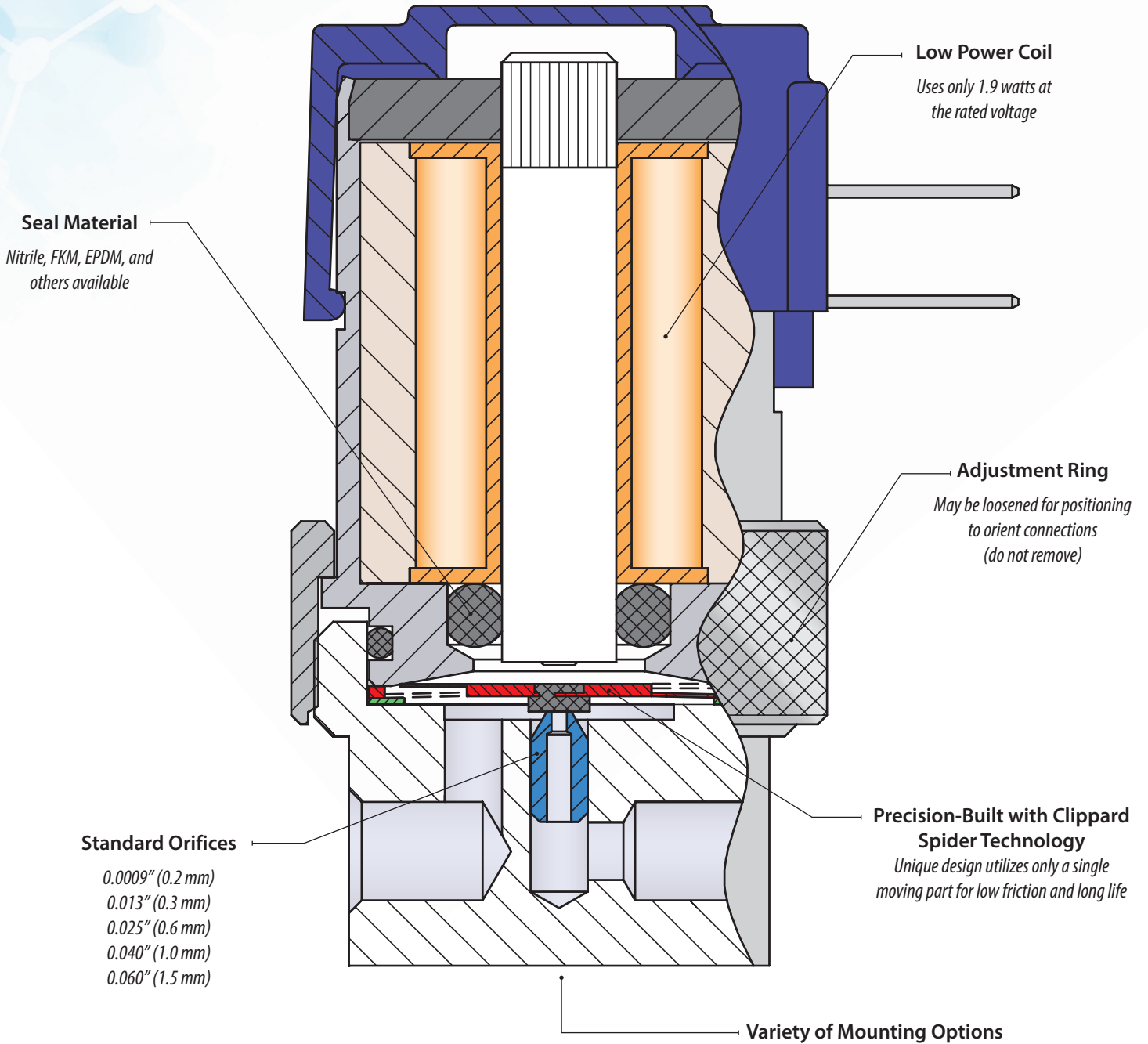
Please Note: Not all possible configurations are valid.
Consult the online configurator at clippard.com.

Example Part Number:
EC-P-05-0925

For more info, scan the
QR code or visit
clippard.com/link/evp-series



A Close-Up of the EVP Series



How to Select Your EVP Proportional Valve

When choosing your valve, there are many variables to consider. To select the best valve for your application, focus on:

- 1 Control Signal
- 2 Valve Orifice
- 3 Operating Pressure

Please Note: It is important to specify and use a calibrated valve that matches your application. Be sure to use a valve set to your operating pressure. Otherwise, the required power for opening the valve will be high and the resolution to set your flow proportional will be poor.

1 CONTROL SIGNAL

Voltage Range	Input Current Range	Coil Resistance	Max. Voltage Required
0 to 5 VDC @ 72°F (22°C)	0 to 0.370A	13.5 ohms @ 72°F (22°C)	6.2 VDC
0 to 10 VDC @ 72°F (22°C)	0 to 0.185A	54 ohms @ 72°F (22°C)	12.4 VDC
0 to 20 VDC @ 72°F (22°C)	0 to 0.092A	218 ohms @ 72°F (22°C)	24.8 VDC

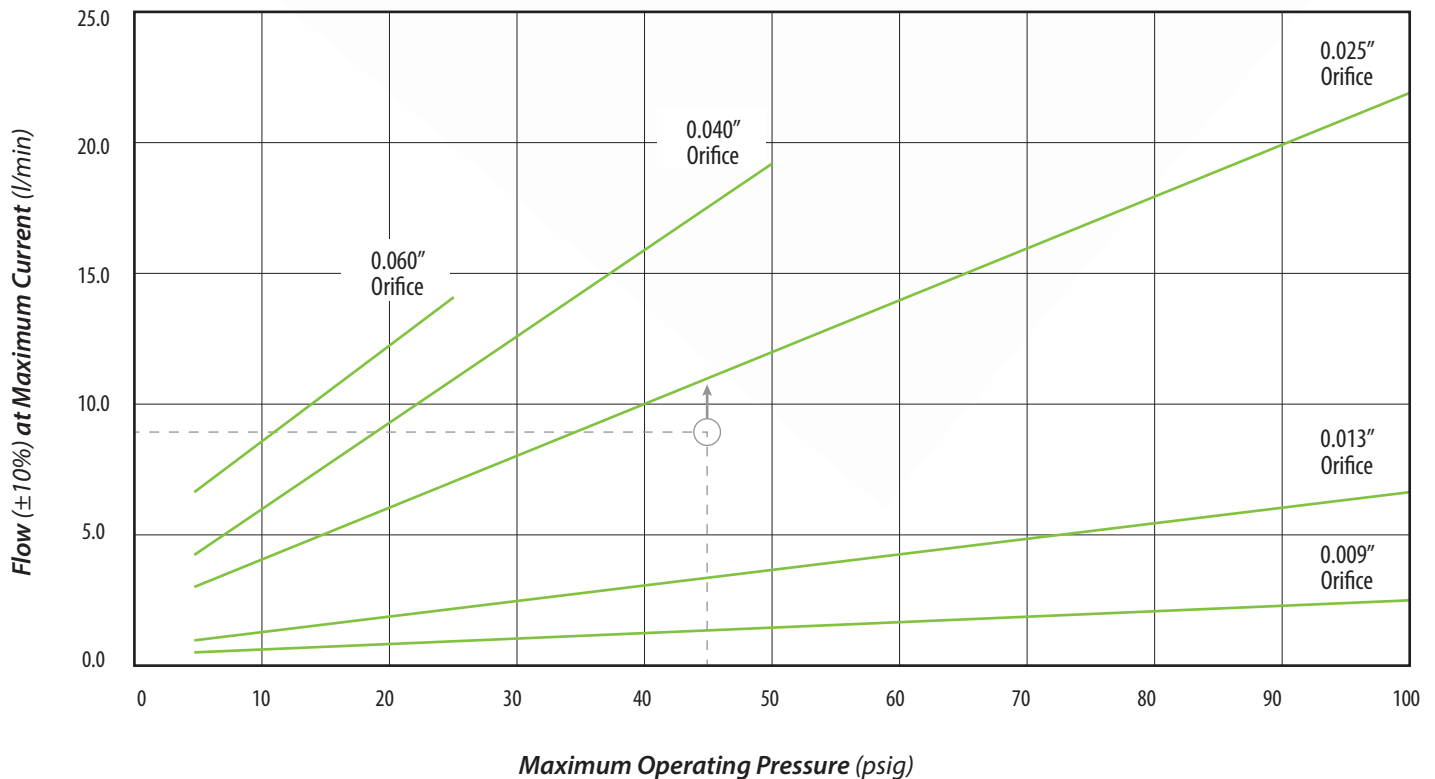
Note: Do not exceed input current range

2 VALVE ORIFICE (Maximum Working Pressure)

Orifice Diameter	Rated Pressure	Flow at Max. Current (±10%)
0.009" (0.23 mm)	100 psig (7 bar)	2.7 l/min @ 100 psig (7 bar)
0.013" (0.33 mm)	100 psig (7 bar)	6.7 l/min @ 100 psig (7 bar)
0.025" (0.64 mm)	100 psig (7 bar)	22.0 l/min @ 100 psig (7 bar)
0.040" (1.02 mm)	50 psig (3.4 bar)	18.7 l/min @ 50 psig (3.4 bar)
0.060" (1.52 mm)	25 psig (1.7 bar)	14.0 l/min @ 25 psig (1.7 bar)

Note: Maximum flow is measured at maximum pressure

3 OPERATING PRESSURE - Maximum Flow vs. Operating Pressure



To determine the correct orifice required, locate the colored line immediately above the flow/pressure intersection.
 Example: 9 slpm required at 45 psig inlet. This example leads to a ~2545" valve (0.025" nozzle, 45 psig).