

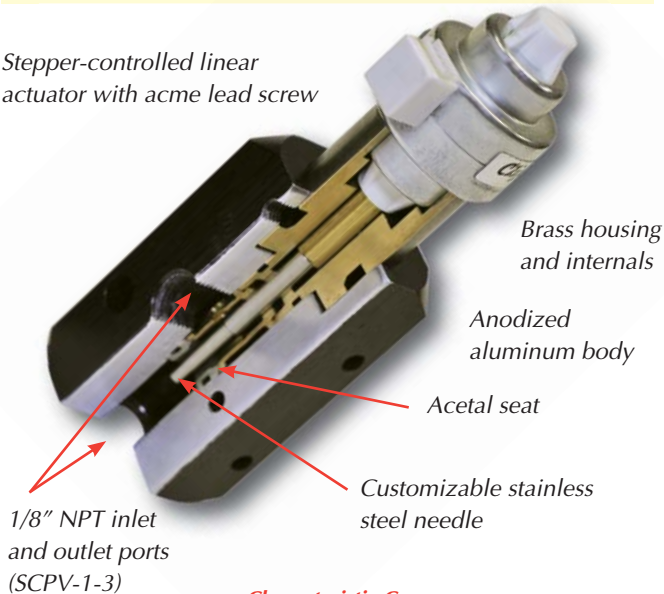
EXPANDED! 2-WAY STEPPER-CONTROLLED PROPORTIONAL VALVES



Features

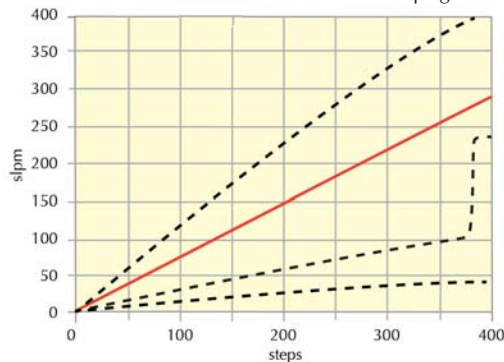
- <2% hysteresis
- Excellent Linearity — <2.5% of full-scale
- 2 ms reaction time
- Millions of cycles
- Holds position for power savings or at loss of power

Stepper-controlled linear actuator with acme lead screw



Characteristic Curve

Flow Rate for SCPV-1-3 @ 100 psig



— SCPV-1-3

- - - - OEM Custom Application Possibilities

Utilizing the industry's most robust and powerful linear actuator, the high flow stepper-controlled proportional valve outperforms the competition in performance and durability.

This valve is ideal in critical applications such as gas delivery, medical, analytical, and industrial automation requiring high resolution, high flow, and low hysteresis. In addition, the unique design allows for custom flow profiles when required.

Medium: Air and compatible gases

Typical Cycle Time for Full Travel: 0.95 seconds at 100% duty cycle; 0.55 seconds at 25% duty cycle (full open to full close or full close to full open)

Wetted Material: Stainless steel, aluminum, brass, Acetal and FKM*

Pressure Range: Vac to 100 psig*

Flow Range: 0 to 280 slpm (special configurations over 500 slpm available, consult factory)*

Flow Resolution: 0.7 slpm per step

Position Resolution: 0.001" per step

Temperature Range: 32 to 184°F

Driver: Bipolar chopper drive required

Needle: 3.5°

Supply Voltage to Motor: 5 VDC

Response Time: 0.95 sec. fully-open to fully-closed

Mounting: In-line, manifold or cartridge

Power Consumption: 3.85 watts nominal only during adjustment. Zero power consumption to maintain position.

Seals: FKM standard. Others available.

Option: Rubber seat (add "-R" suffix)

* This product is highly modifiable for OEM applications including alternate body materials, flow profiles, cartridge styles, manifold mounting, etc. Please consult factory.

Clippard has successfully produced special configurations of the SCPV with flows over 700 slpm at 100 psig. Please consult factory with your specific requirements.

Part No.	Description
SCPV-1-3	Proportional Valve, In-Line
SCPV-1-3M	Proportional Valve, Manifold
SCPV-1-3C	Proportional Valve, Cartridge

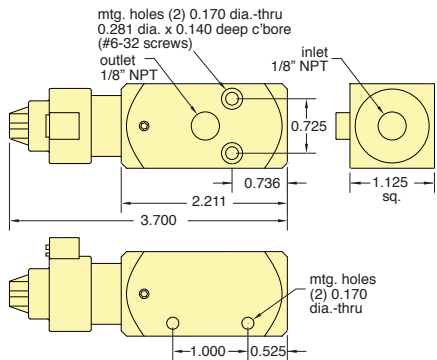


For further information, visit www.clippard.com/scpv

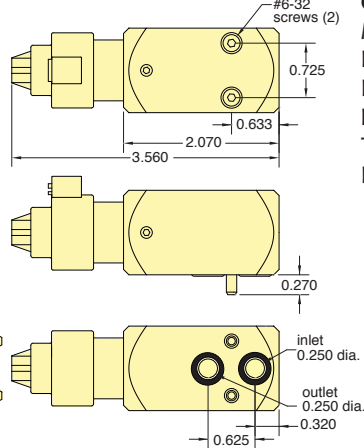


EXPANDED! 2-WAY STEPPER-CONTROLLED PROPORTIONAL VALVES

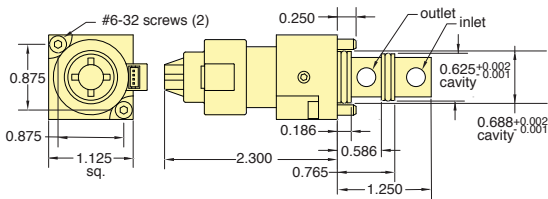
SCPV-1-3



SCPV-1-3M



SCPV-1-3C

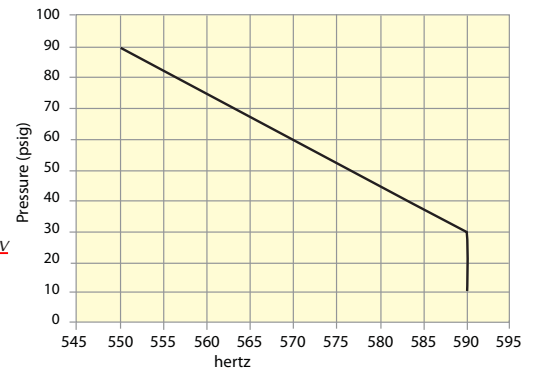


For helpful information and video, visit www.clippard.com/scpv

Linear Actuator Characteristics

Wiring:	Bipolar
Current/Phase:	385 mA
Motor Voltage:	5 VDC
Resistance/Phase:	13 ohms
Inductance/Phase:	8.08 mH
Power Consumption:	3.85 Watts
Temperature Rise:	135°F
Insulation Resistance:	20M ohms

Maximum Step Pulse Frequency vs. Operating Pressure



Control Data

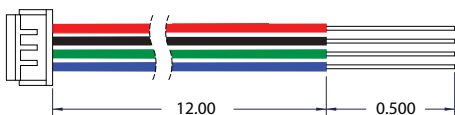
A **Bipolar Chopper Drive** (not included) is a power-efficient method of using current to drive a stepping motor to obtain high stepping rates. The chopper gets its name from the technique of rapidly turning the output voltage on and off (chopping) to control motor current.

Stepper motors require some external electrical components in order to operate. These components typically include a power supply, logic sequencer switching components, and a clock pulse source to determine the step rate. Many commercially available drives have integrated these components into a complete package. See www.clippard.com/scpv for more information.

Potential Applications

- Medical/Analytical/Industrial Gas Mixing
- Anesthesia Equipment
- Precision Flow Control
- Cuff/Bladder Pressure Control
- Process Flow Control
- Variable Speed Control
- Automation of Needle Valve

Wiring Harness (included)



Color	Pin	Color
Red (A+)	3	Green (B-)
Black (A-)	4	Blue (B+)

