

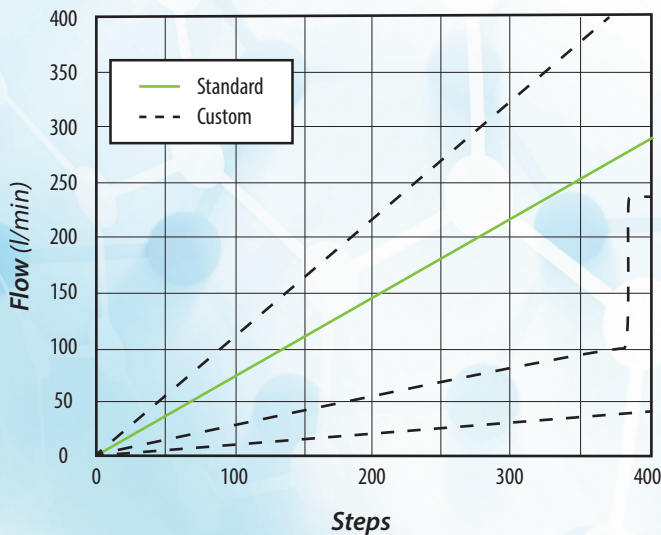
SCPV NEEDLE VALVES



Utilizing the industry's most robust and powerful linear actuator, the SCPV series high flow stepper-controlled proportional valves outperform the competition in performance and durability. These valves are 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.

Positioning a 3.5° needle through a 0.152" (3.9 mm) orifice in 0.001" (0.03 mm) step increments provides for very linear and repeatable flow control within your application process. Standard models, inline, cartridge, and manifold mounts are ready to go for control of air and other inert gases.

Flow Rate (SCPV-1-3 @ 100 psig)



Connection	Connector / wiring harness
Driver	Bipolar chopper drive required
Flow Range	Up to 280 l/min
Flow Resolution	0.7 l/min per step
Linearity	<2.5% of full scale
Material, Wetted	Stainless steel, aluminum, brass, acetal, and FKM
Max. Hysteresis	<2%
Max. psig	100 psig
Medium	Air or compatible gases
Mount	In-line, manifold, or cartridge
Needle	3.5°
Number of Ports	2
Operating Pressure	Vac. to 100 psig (7 bar)
Operating Temp. Range	32 to 184°F (0 to 84°C)
Port, Inlet	1/8" NPT, manifold, or cartridge
Port, Outlet	1/8" NPT, manifold, or cartridge
Position Resolution	0.001" (0.03 mm) per step
Power Requirement	5 VDC supply to motor
Repeatability	<0.5% of full scale
Response Time	0.95 secs fully-open to fully-closed
Wattage	3.85 watts nominal (only during adjustment—zero power consumption to maintain position)
More Details	clippard.com/link/scpv-series

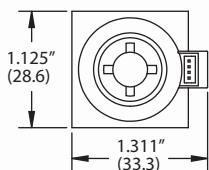
CUSTOMIZABLE FOR YOUR APPLICATION

The SCPV is highly modifiable for OEM applications, including:

- Flow profiles up to 5,800 l/min
- High flow at low pressure
- Materials such as PEEK or stainless steel
- Special seal materials such as FFKM and others
- Applications for control of water
- Applications that provide zero leak shutoff
- Changing the motor to accommodate an encoder
- Providing specific testing procedures

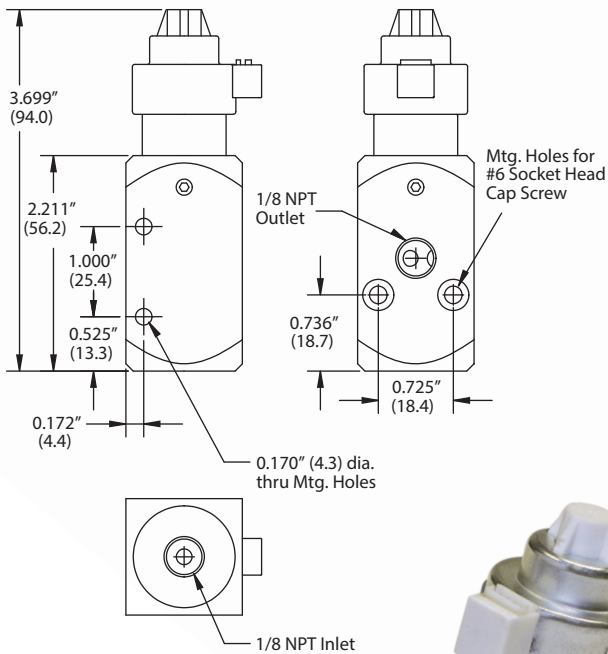
Contact Clippard to discuss what changes can be made to best fit your application requirements.

Inline Mount

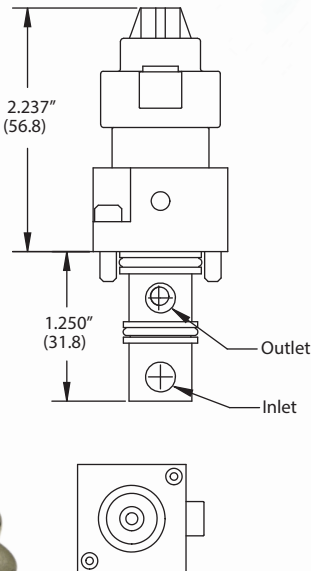
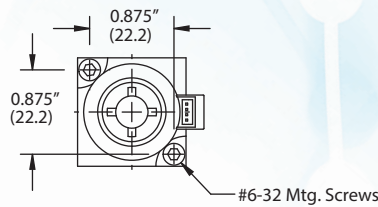


Dimensions shown are in inches
(millimeters listed in parentheses).

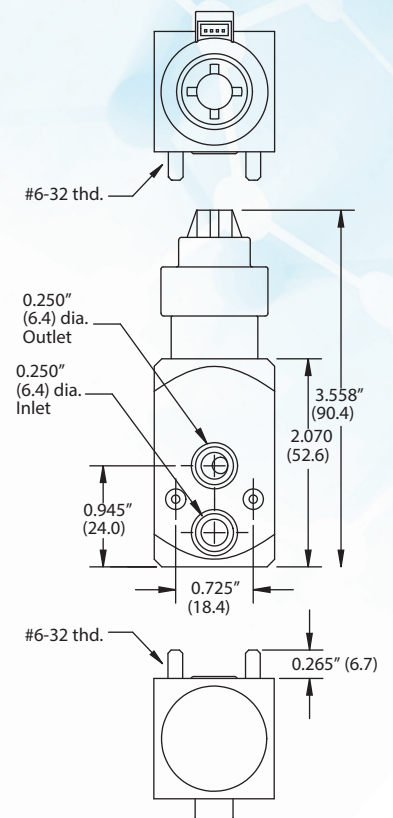
Visit clippard.com for more detailed
2D and 3D drawings.



Cartridge Mount



Manifold Mount

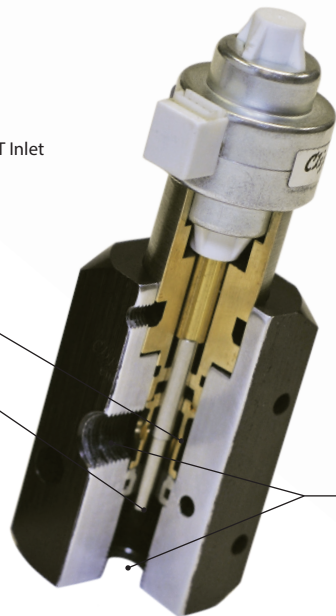


Acetal seat

Customizable
stainless steel needle

Anodized
aluminum body

Brass housing
and internals

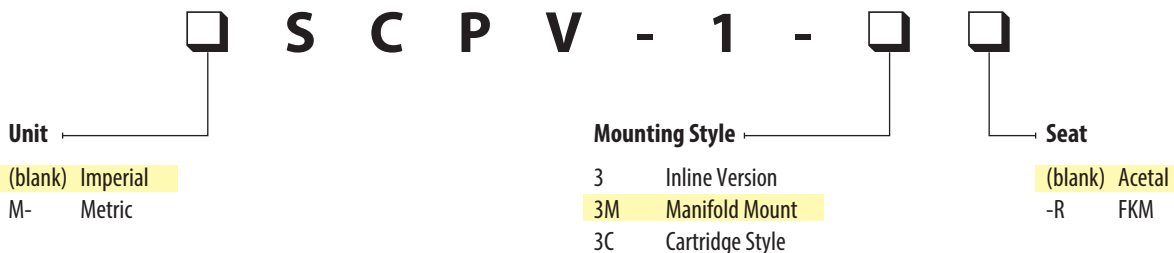


Stepper-controlled
linear actuator with
acme lead screw

1/8" NPT inlet &
outlet ports (SCPV-1-3)

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

ORDERING INFORMATION



Example Part Number:
SCPV-1-3M

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

