

SV28

Miniature High Flow Proportional Control Valve



Valcor Engineering Corporation



DESCRIPTION

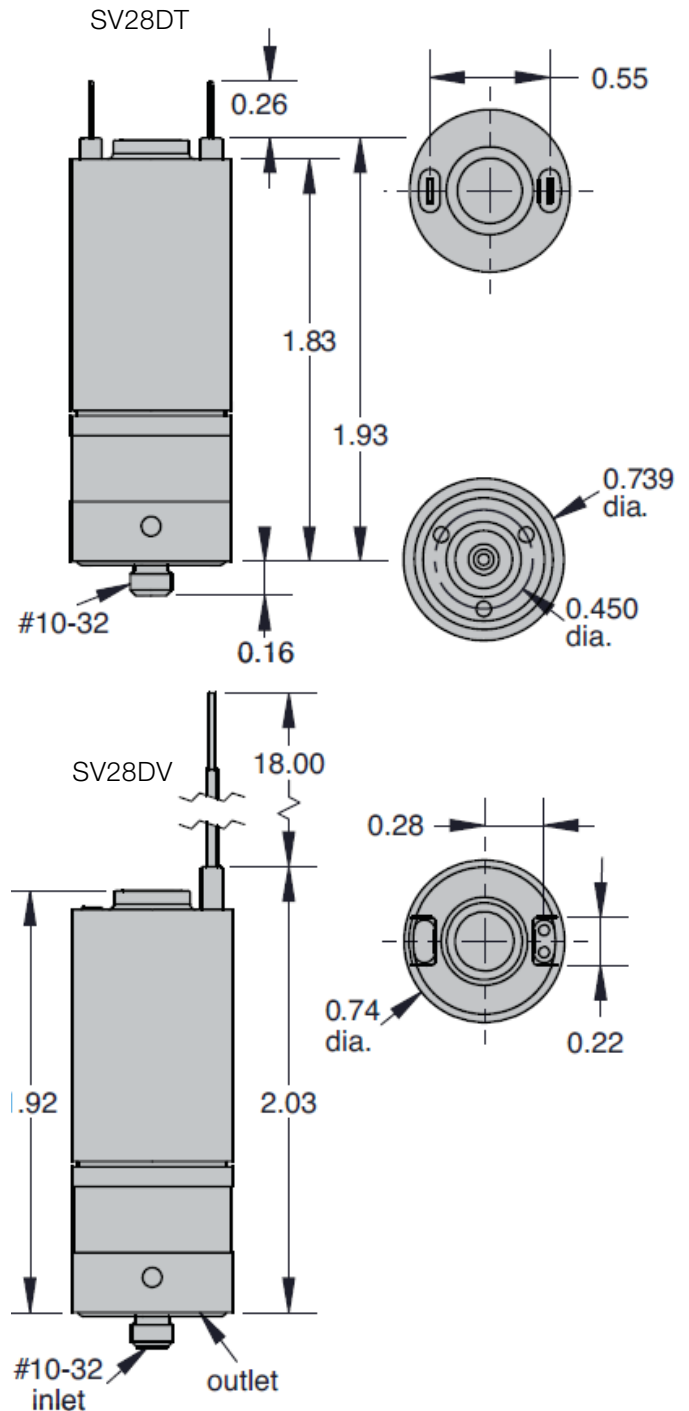
The SV28 series miniature proportional flow control valves employ a unique spider-spring valving element to control the flow of air and non-corrosive gases and liquids under pressure or vacuum through the valve. By varying the current to the coil in an open-loop control scheme, the flow will proportionally range from no flow to max flow. To further increase the response and precision of flow control, use a variable current or pulse width modulated signal from a closed-loop process controller. The robust stainless steel spider spring and elastomer sealing poppet provides for positive shut-off with extremely fast response times. With a service life of over a billion cycles, high flow rates, and low power consumption, these valves are suitable for many instrumentation applications.

APPLICATION

The SV28 series miniature proportional control valves are ideal for air and non-corrosive gas and liquid applications requiring precision flow control with exceptionally long service life. Applications include: inert atmosphere packaging, battery powered blood pressure cuff inflation, low volume liquid packaging equipment, vacuum pick and place systems, TIG and MIG shielding gas control, and air bearing pressure control.

FEATURES

- 100 PSIG maximum pressure
- 28" Hg vacuum
- 100 l/Min flow at 100 PSIG inlet pressure
- Extremely fast ms response time
- Low hysteresis ensures highly repeatable current to flow settings
- 12 and 24 VDC 1.9 watt @ 72° F, coils rated for continuous duty
- 10-32 manifold mount and cartridge mount bodies
- 32 - 130° F media and ambient temperature
- Mountable in any orientation
- Fully customizable for your application



Custom designs are our specialty. Contact us today to see how we can help on your next project.

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Specifications

Valve Type	2-Way, Proportional
Medium	Air & Compatible Gases (40 micron filter)
Pressure Range	Vac* to 100 psig
Max. Hysteresis	10% of full current
Max. Flow Tolerance	+10%/-0%
Power Consumption	1.9 watts at 72 °F, 2.5 watts max
Temperature Range	32 to 120°F
Voltage	10 or 20 VDC
Mounting	Manifold, #10-32 Male Stud
Seal Material	FKM standard, Nitrile, EPDM, and Silicone optional
Wetted Materials	Stainless Steel, PPS
Certifications	CE, RoHS, REACH

Although voltage is an important issue, the current is somewhat more important. It is crucial to specify and use a calibrated valve that matches your application. Be sure to use a valve set to your operating pressure to assure you have an overall good performing valve for your exact requirements.

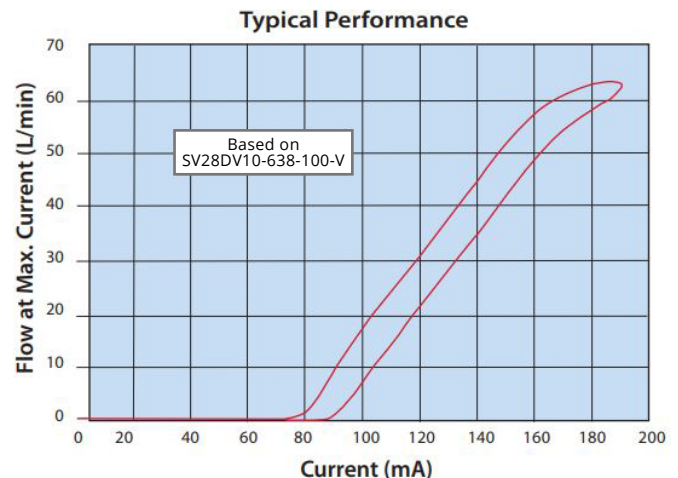
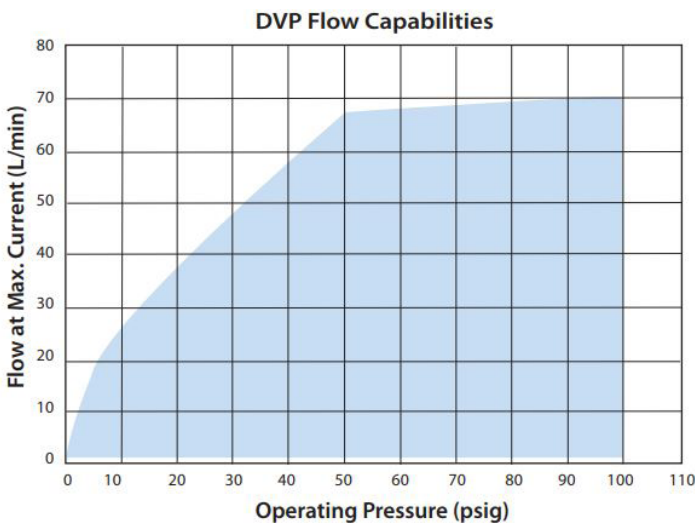
Proportional flow is achieved by varying the current input to the valve.

Nominal Voltage Range at 72 °F	Input Current Range	Coil Resistance at 72 °F	Max. Voltage Required
0 to 10 VDC	0 to 0.190 amps	52.6 ohms	13 VDC
0 to 20 VDC	0 to 0.095 amps	210.5 ohms	26 VDC

Pressure & Flow

In selecting your valve, reference the SV28 Flow Capabilities Chart shown below and list your Nominal Operating Pressure in a 3-digit format (065=65 psig). Next specify your desired Max. Flow Rate for your pressure (500=50.0 L/min). Accurately specify your Nominal Operating Pressure and Flow to assure the best performance and resolution for your application.

For Nominal Operating Pressure under 5 psig, use a 005 designator for Pressure. For Vacuum applications use the positive pressure equivalent and reverse the ports.



* Call for custom flow and pressure configurations

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Parts

Valcor P/N	Description	Type	Flow	Pressure	Elastomer	Ports I/O
SV28DT10-XXX-XXX-X	10 Volt Proportional Valve	Spade Terminal	010-678	005-100	Blank (Nitrile)	10/32
SV28DT20-XXX-XXX-X	20 Volt Proportional Valve	Spade Terminal	010-678	005-100	V (FKM) Standard	10/32
SV28DV10-XXX-XXX-X	10 Volt Proportional Valve	Wire Leads	010-678	005-100	E (EPDM)	10/32
SV28DV20-XXX-XXX-X	20 Volt Proportional Valve	Wire Leads	010-678	005-100	S (Silicone)	10/32

Example Part Number

Valcor P/N	Description	Type	Flow	Pressure	Elastomer	Ports I/O
SV28DT10-100-500-V	10 Volt Proportional Valve	Wire Leads	10.0 L/Min	50 PSIG	FKM O-Ring	10/32

Single-Station Manifold

Construction ENP brass standard. Other materials available.

