

SV690C3 & SV690C24

Precision 3,000/24,000 and 24,000/192,000 Step Syringe Pump Modules
Direct Drive Stepper Motor Driven
Syringe Volumes of 50 Microliters to 12.5 Milliliters

Valcor Dispensing / Metering Series



DESCRIPTION

The SV690 series syringe pump module is a direct drive stepper motor driven pump that accurately and precisely delivers a wide range of fluids. With dispensing ranges from a few microliters to 12.5 milliliters, they utilize standard communication protocols and mounting configurations used by other compact syringe pump designs.

APPLICATIONS

The SV690 series is a versatile pump module that provides all typical aspiration and dispensing operations expected from an OEM syringe pump. Designed for OEM automated instrumentation, they are ideal units for experienced IVD instrument manufacturers looking to maximize the investment already made in existing instrumentation.

FEATURES

- A seamless replacement for the XP, XCalibur, PSD/4 and PVM pumps
- High resolution options available up to 192,000 steps/full-stroke
- High efficiency, maintenance free drive system
- Direct drive design (no belts)
- Long life rotary shear valves - up to 24 times longer verses competitive valves
- Syringe sizes from 50uL to 12.5mL



VALCOR SV690C3 & SV690C24 SERIES SPECIFICATIONS

Specifications

Drive Design	SV690C3: Direct drive stepper motor/lead screw with 30 mm of travel. Manually moveable for 'power off' syringe removal. Maintenance free design SV690C24: Direct drive stepper motor/lead screw with 30 mm of travel. Maintenance free design
Stroke Speed	SV690C3: 1.2 seconds to 100 minutes per stroke. (800 minutes in microstep mode) SV690C24: 4.2 seconds to 800 minutes per stroke. (3200 minutes in microstep mode)
Resolution	SV690C3: Standard mode 3,000 steps, Hi-Res mode 24,000 steps SV690C24: Standard mode 24,000 steps, Hi-Res mode 192,000 steps
Available Volumes	50 uL, 100 uL, 250 uL, 500 uL, 1 mL, 2.5 mL, 5 mL, 12.5 mL
Precision	≤ 0.1% CV at 50 uL to 100 uL, ≤ 0.05% CV at 250 uL to 12.5 uL
Accuracy (Full Stroke)	≤ 1% syringe volume
Dimensions	1.75"W x 5.00" H x 4.50" D (44.5 mm x 127 mm x 114.3 mm)
Fluid Contact Materials	Syringe: Borosilicate Glass and UHMWPE or PTFE (seal) Pressure to 80 PSI Valve: PCTFE or PEEK (body) and PTFE or UHMWPE (plug) Pressures to 100 psi
Environmental	Operating: Temperature: 15°C to 40°C (59°F to 104°F) Humidity: 20-95% RH at 40°C (104°F)
Regulatory Compliance:	SV690C Series pumps are general laboratory components subject to FDA regulatory approval and do not carry independent CE markings. Applicable safety markings typically meet the needs of system designers. ISO 13485 registered manufacturing facility
Resolution	SV690C3: Standard mode 3,000 steps Hi-Res mode 24,000 steps SV690C24: Standard mode 24,000 steps Hi-Res mode 192,000 steps
Valve Drive	Stepper motor with Position Sensors ≤ 250 ms between neighboring ports
Power	Requirement: 24VDC +/- 10% Rating: ≤ 1.5 Amp (peak)
Interface	Type: RS232, RS485, or CAN Communication: 9600 or 38400 baud (RS232 / RS485) Rates: 100 or 125 kbits (CAN) Format: (RS232 / RS485) Data Bits – 8, Parity – None, Stop Bit – 1
Addressing	Maximum of 15 pumps addressed individually

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SV690C3 & SV690C24 Pumps - Part Number Configurator

Example Part Number: **SV690C3-10010** (SV690C3 with 120° 3-port valve PEEK/UHMWPE)

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Series	Valve Selection		Series	Valve Selection	
SV690C3	10010	120° 3-port valve PEEK/UHMWPE	SV690C24	10018	120° 3-port Valve PEEK/UHMWPE
	10011	120° 3-port valve PEEK/PTFE		10019	120° 3-port Valve PCTFE/UHMWPE
	10012	120° 3-port valve PCTFE/UHMWPE		10028	120° 3-port Valve PEEK/PTFE
	10013	120° 3-port Valve PCTFE/PTFE		10029	120° 3-port Valve PCTFE/PTFE
	10030	90° 4-port Valve PEEK/UHMWPE		10038	90° 4-port Valve PEEK/UHMWPE
	10031	90° 4-port Valve PEEK/PTFE		10039	90° 4-port Valve PCTFE/UHMWPE
	10032	90° 4-port Valve PCTFE/UHMWPE		10048	90° 4-port Valve PEEK/PTFE
	10033	90° 4-port Valve PCTFE/PTFE		10049	90° 4-port Valve PCTFE/PTFE
	10052	Distribution 4-port Valve PCTFE/UHMWPE		10059	Distribution 4-port Valve PCTFE/UHMWPE
	10053	Distribution 4-port Valve PCTFE/PTFE		10069	Distribution 4-port Valve PCTFE/PTFE
	10110	T 3-Port Valve PEEK/UHMWPE			
10120	T 4-Port Valve PEEK/UHMWPE				

Replacement Valves

10020	120° 3-port valve, ¼-28, PEEK/UHMWPE
10021	120° 3-port valve, ¼-28, PEEK/PTFE
10022	120° 3-port valve, ¼-28, PCTFE/UHMWPE
10023	120° 3-port valve, ¼-28, PCTFE/PTFE
10040	90° 4-port valve, ¼ -28, PEEK/UHMWPE
10041	90° 4-port valve, ¼-28, PEEK/PTFE
10042	90° 4-port valve, ¼-28, PCTFE/UHMWPE
10043	90° 4-port valve, ¼-28, PCTFE/PTFE
10062	Distribution 4-port, ¼-28, PCTFE/UHMWPE
10063	Distribution 4-port, ¼-28, PCTFE/PTFE
10015	T 3-port, ¼-28, PEEK/UHMWPE
10025	T 3-port, ¼-28, PEEK/UHMWPE

Syringes

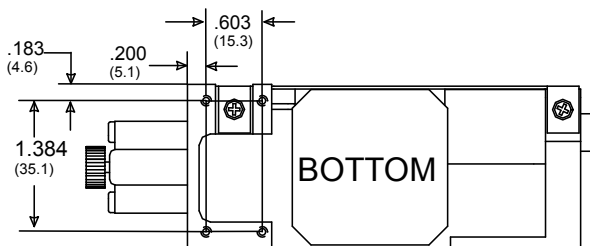
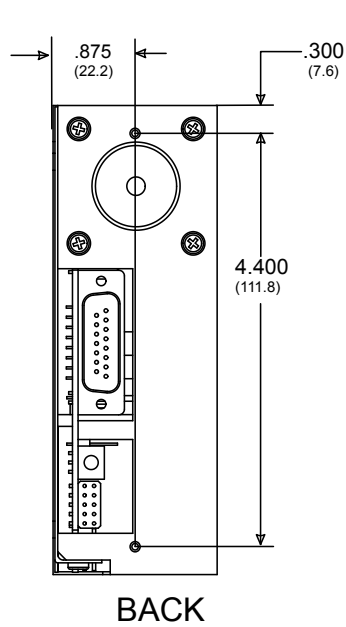
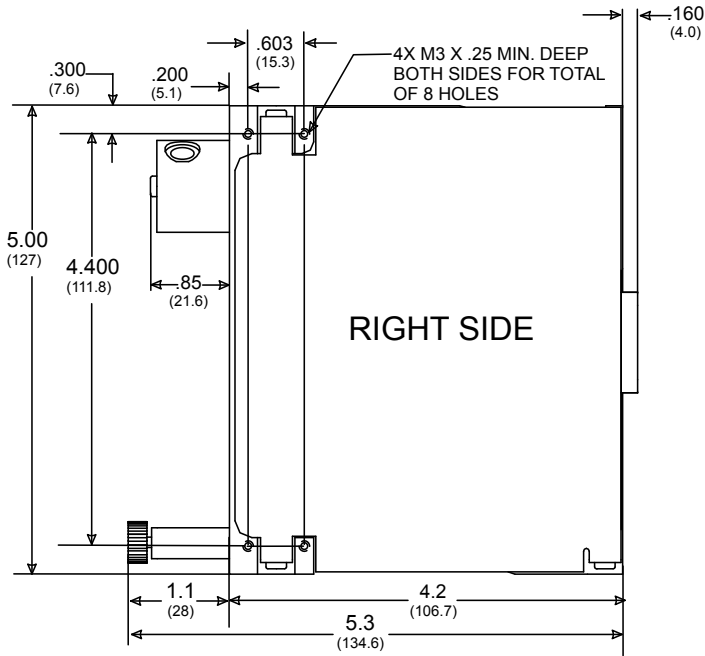
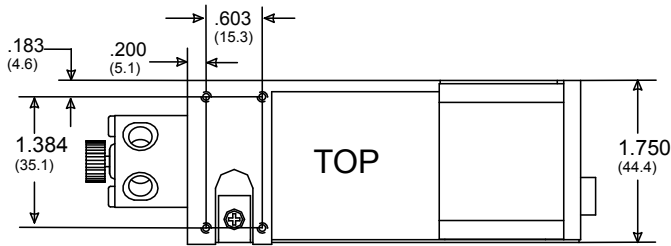
10070	50 uL UHMWPE
10071	100uL UHMWPE
10072	250uL UHMWPE
10073	500uL UHMWPE
10074	1 mL UHMWPE
10075	2.5mL UHMWPE
10076	5 mL PTFE
10080	50 uL PTFE
10081	100uL PTFE
10082	250uL PTFE
10083	500uL PTFE
10084	1 mL PTFE
10085	2.5mL PTFE
10086	5 mL PTFE
10088	12.5 mL PTFE

Accessories

10171	SV690C Series Evaluation Kit. Includes Power Supply, Tubing Kit, USB Converter/Cable and Guide
10172	Cable, RS232 to Pump
8152-09	Universal Power Supply
8246-71	Cable, Interface Converter to Pump
8698-03	Cable, USB-A/USB-B, 2 meter

VALCOR SV690C3 & SV690C24 SPECIFICATIONS

Specifications



ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED
 .XXX ± .008 (.02mm)
 (MILLIMETERS SHOWN IN BRACKETS)

ALL MOUNTING HOLES ARE
 M3 X .5mm X 6.3mm DEEP MIN.