

X-VSR40A-SV2 Datasheet



- Vacuum compatible to 10⁻⁶ Torr
- 20 mm or 40 mm travel
- Up to 48 mm/s speed and up to 200 N thrust
- 10 kg load capacity
- 55 or 85 mm retracted height
- Built-in controller; daisy-chains with other Zaber products
- Only 4 feedthrough wires required to control all units in the daisy-chain via serial port (with an X-PIB adaptor)

X-VSR-SV2 Series Overview

For more information about the basics of a vacuum system and considerations to keep in mind when gathering requirements for your application, read our technical article, "Motion Device Design Considerations for Vacuum Applications".

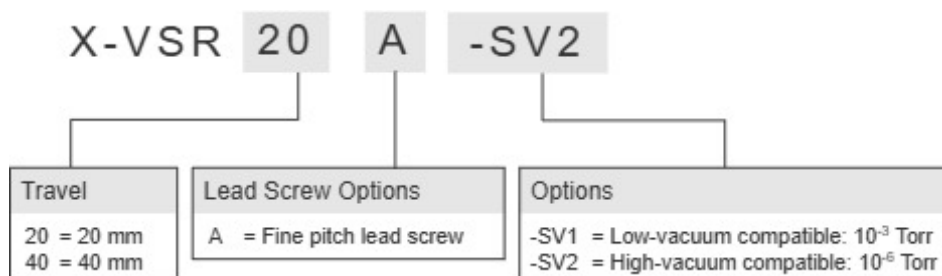
Zaber's X-VSR-SV2 Series devices are high-vacuum compatible, computer-controlled, motorized vertical lift stages capable of moving 10 kg loads. They are stand-alone units requiring only a standard 24 V or 48 V power supply.

These stages connect to the RS-232 port or USB port of any computer, and they can be daisy-chained with any other Zaber products. The daisy-chain also shares power, making it possible for multiple X-Series products to share a single power supply.

Like all of Zaber's products, the X-VSR-SV2 Series is designed to be 'plug and play' and very easy to set up and operate. If you are considering a multi-axis system, with Z-axis, these lift stages make an excellent platform.

For more information visit: <https://www.zaber.com/products/vacuum-compatible-stages/X-VSR-SV2>

X-VSR-SV2 Series Part Numbering & Options



X-VSR40A-SV2 Drawings

- [X-VSR-SV.png \(Dimension Drawing for the X-VSR-SV\)](#)

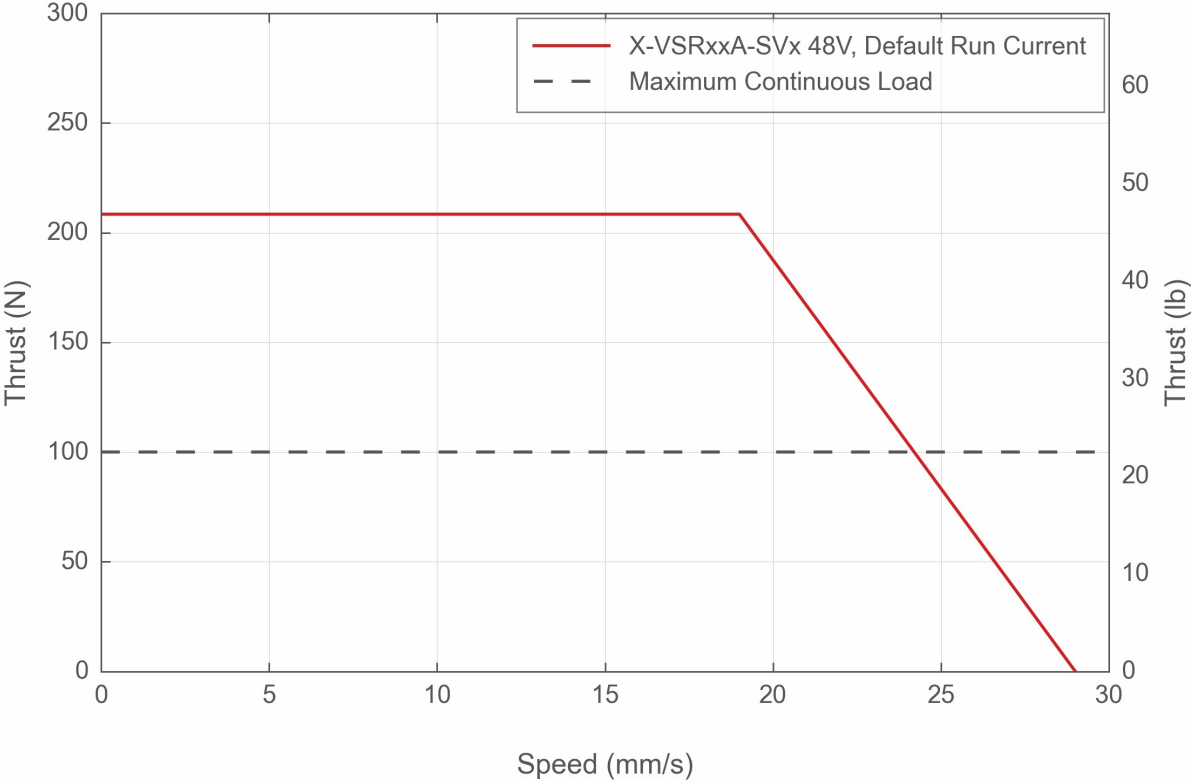
X-VSR40A-SV2 Specifications

Microstep Size (Default Resolution)	0.09525 μm
Built-in Controller	Yes
Travel Range	40 mm (1.575")
Accuracy (unidirectional)	35 μm (0.001378")
Loaded Accuracy (10 N)	20 μm (0.000787")
Repeatability	< 1 μm (< 0.000039")
Loaded Backlash (10 N)	< 10 μm (< 0.000394")
Backlash	< 120 μm (< 0.004724")
Maximum Speed	28 mm/s (1.102"/s)
Minimum Speed	0.000058 mm/s (0.000002"/s)
Speed Resolution	0.000058 mm/s (0.000002"/s)
Peak Thrust	200 N (44.9 lb)
Maximum Continuous Thrust	100 N (22.4 lb)
Communication Interface	RS-232
Communication Protocol	Zaber ASCII (Default), Zaber Binary
Data Cable Connection	Teflon flying leads with M8 4 pin M/F
Maximum Centered Load	100 N (22.4 lb)
Maximum Moment (Pitch)	300 N-cm (424.8 oz-in)
Maximum Moment (Roll)	300 N-cm (424.8 oz-in)
Maximum Moment (Yaw)	300 N-cm (424.8 oz-in)
Horizontal Runout	< 35 μm (< 0.001378")
Pitch	0.08° (1.396 mrad)
Roll	0.08° (1.396 mrad)
Yaw	.08° (1.396 mrad)
Power Supply	24-48 VDC
Power Plug	None, use X-PIB
Maximum Current Draw	950 mA
Linear Motion Per Motor Rev	1.2192 mm (0.048")

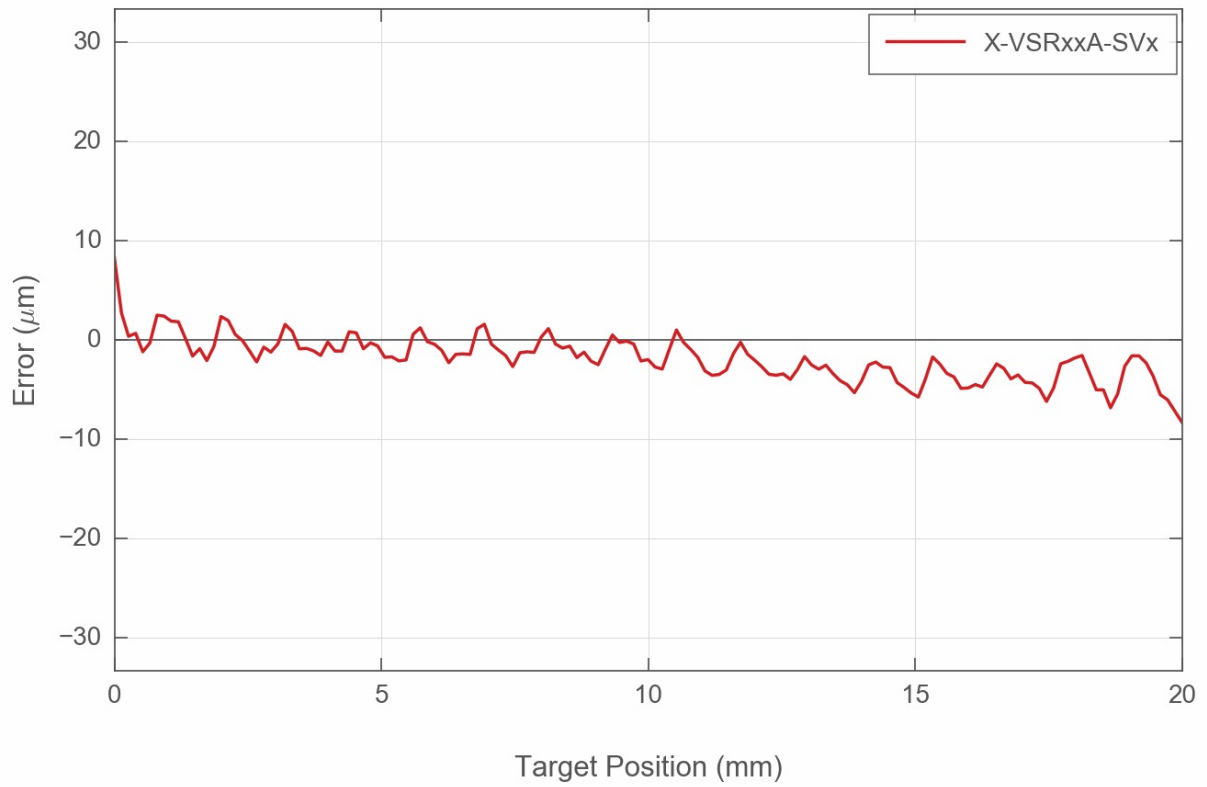
Microstep Size (Default Resolution)	0.09525 μm
Motor Steps Per Rev	200
Motor Type	Stepper (2 phase)
Motor Rated Current	700 mA/phase
Inductance	8.7 mH/phase
Default Resolution	1/64 of a step
Guide Type	Crossed-Roller Bearing
Mechanical Drive System	Precision Lead Screw
Limit or Home Sensing	Magnetic home sensor
Manual Control	No
Axes of Motion	1
Mounting Interface	M6 and M3 threaded holes
Operating Temperature Range	0-50 °C
CE Compliant	Yes
Vacuum Compatible	High vacuum (10 ⁻⁶ Torr)
Weight	0.770 kg (1.698 lb)

X-VSR-SV2 Series Charts

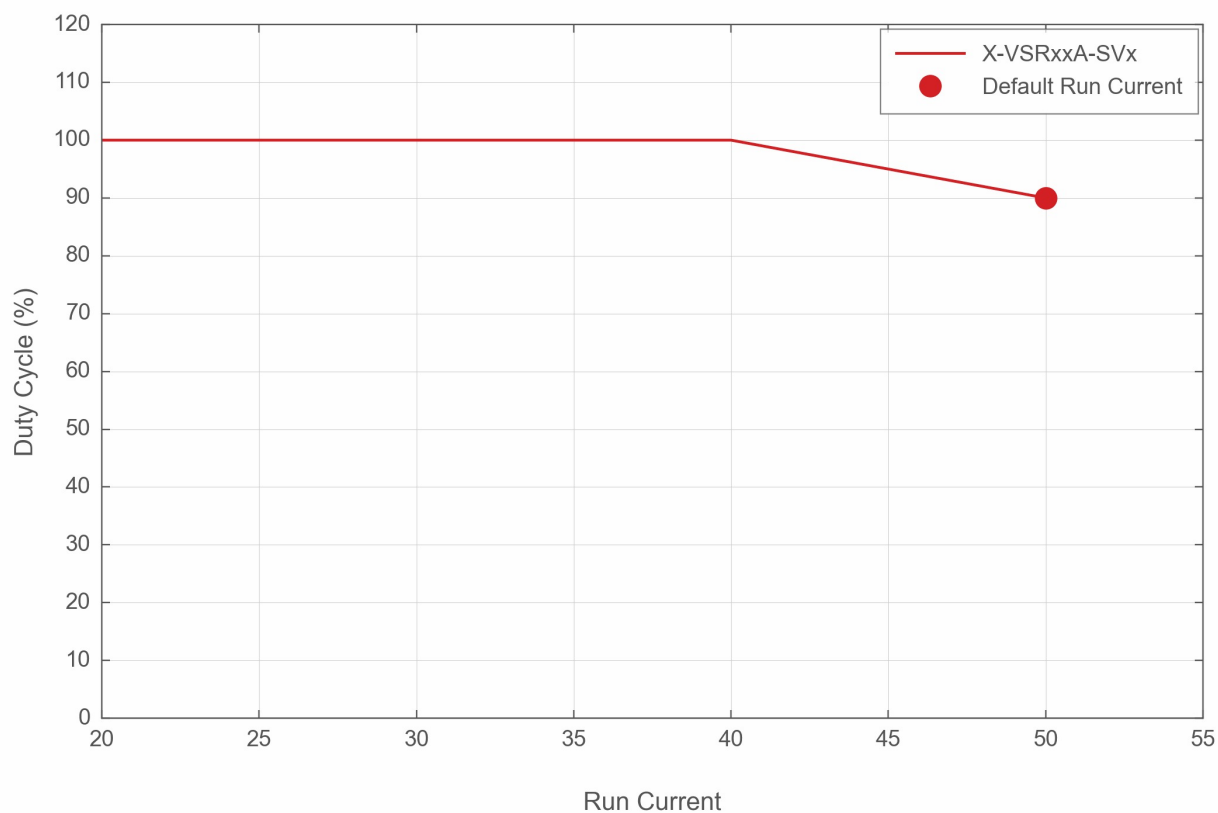
Thrust Speed



Typical Accuracy



Recommended Duty Cycle



Contact

Email: contact@zaber.com

Phone (toll free Canada/USA): 1-888-276-8033

Phone (direct): 1-604-569-3780

Fax: 1-604-648-8033

Zaber Technologies Inc.

#2 - 605 West Kent Ave. N.

Vancouver, British Columbia

Canada, V6P 6T7

<https://www.zaber.com>