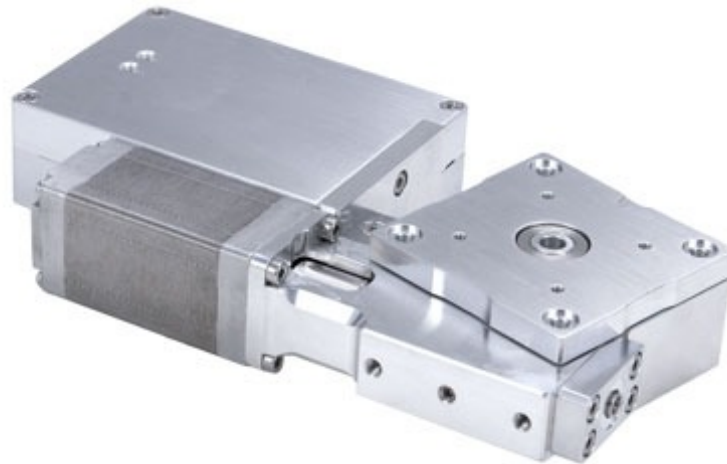


X-RSM-SV2 Series Datasheet



- Vacuum compatible to 10^{-6} Torr
- 21 mm total height
- 0.02° repeatability
- 4 mm aperture
- Worm gear driven for continuous rotation
- Integrated stepper motor controller and motor driver allows for easy-to-use control
- Only 4 feedthrough wires required to control all units in the daisy-chain via serial port (with an X-PIB adaptor)

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-RSM-SV2 Series, high-vacuum compatible rotation stages are our most compact stepper and worm gear driven devices. These are stand-alone units requiring only 4 wires for power and data connection.

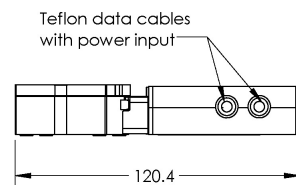
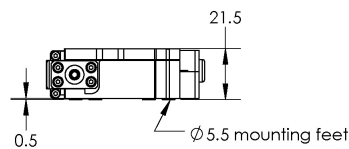
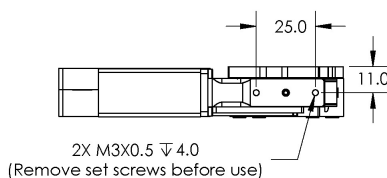
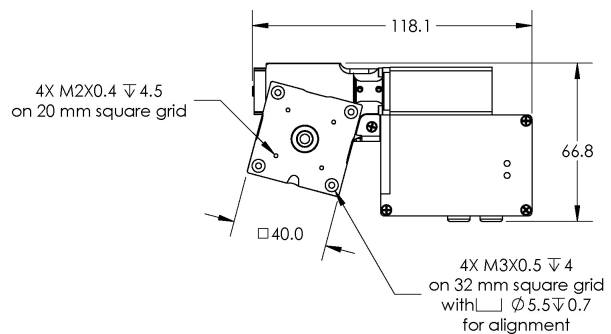
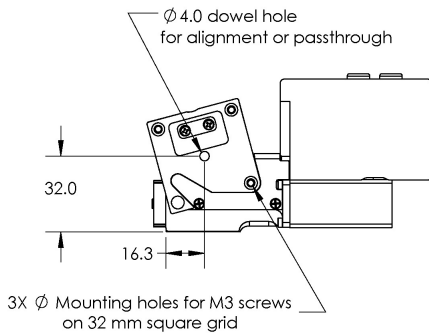
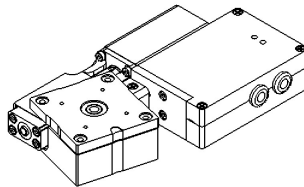
These stages connect to the RS-232 port or USB port of any computer, and they can be daisy-chained with any other Zaber products. The daisy-chain also shares power, making it possible for multiple X-Series products to share a single power supply.

The X-RSM-SV2 is designed with vacuum compatible materials to minimize outgassing and allow for faster pump down times. Like all of Zaber's products, the X-RSM-SV2 Series is designed to be 'plug and play' and very easy to set up and operate.

Drawings

ZABER

**X-RSM-SV Vacuum Compatible
Motorized Rotary Stage**
dimensions in mm



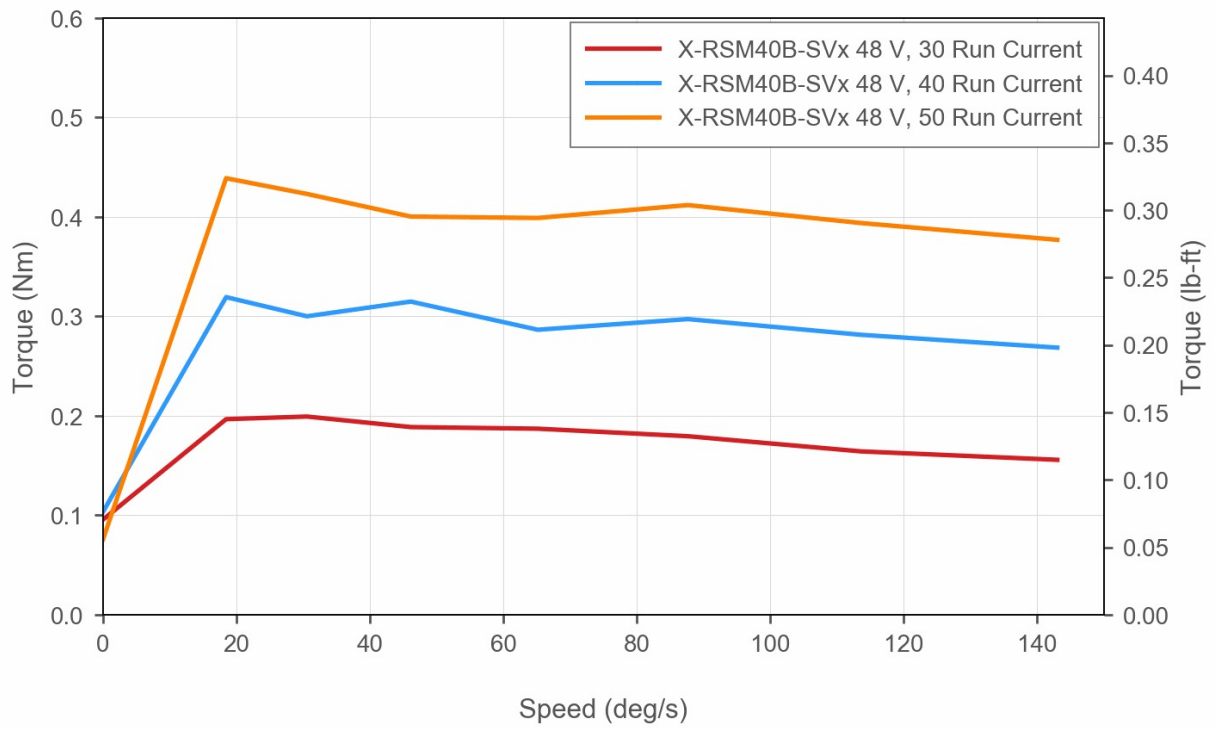
Specifications

| Specification | Value | Alternate Unit |
|-------------------------------------|---------------------------------------|----------------|
| Microstep Size (Default Resolution) | 0.00046875 ° | 8.181 μrad |
| Built-in Controller | Yes | |
| Range | 360 ° | |
| Accuracy (unidirectional) | 0.14 ° | 2.443000 mrad |
| Repeatability | < 0.02 ° | < 0.349 mrad |
| Backlash | < 0.04 ° | < 0.698 mrad |
| Maximum Speed | 120 °/s | 20.0 rpm |
| Minimum Speed | 0.000286 °/s | 4.992 μrad/s |
| Encoder Type | None | |
| Communication Interface | RS-232 | |
| Communication Protocol | Zaber ASCII (Default), Zaber Binary | |
| Maximum Continuous Torque | 20 N-cm | 28.3 oz-in |
| Maximum Centered Load | 50 N | 11.2 lb |
| Maximum Cantilever Load | 30 N-cm | 42.5 oz-in |
| Stage Top Dimension | 40 mm | 1.575 " |
| Maximum Current Draw | 280 mA | |
| Power Supply | 24-48 VDC | |
| Power Plug | None, use X-PIB | |
| Angular Motion Per Motor Rev | 6 ° | |
| Motor Steps Per Rev | 200 | |
| Motor Type | Stepper (2 phase) | |
| Inductance | 3.5 mH/phase | |
| Default Resolution | 1/64 of a step | |
| Data Cable Connection | Teflon flying leads with M8 4 pin M/F | |
| Motor Frame Size | NEMA 08 | |
| Mechanical Drive System | Precision Worm Gear | |
| Limit or Home Sensing | Magnetic home sensor | |
| Manual Control | No | |
| Mounting Interface | M2 and M3 mounting holes | |
| Vacuum Compatible | High vacuum (10 ⁻⁶ Torr) | |
| Operating Temperature Range | 0-50 °C | |

| Specification | Value | Alternate Unit |
|----------------|----------|----------------|
| RoHS Compliant | Yes | |
| CE Compliant | Yes | |
| Weight | 0.300 kg | 0.661 lb |

Charts

Torque Speed Performance



Recommended Duty Cycle

