

X-VSR-E Series Datasheet



- 20 mm travel
- Up to 48 mm/s speed and up to 200 N thrust
- 10 kg load capacity
- Built-in, 500 CPR, motor encoder provides slip/stall detection and recovery
- 73 mm retracted height
- Built-in controller; daisy-chains with other Zaber products

X-VSR-E Series Overview

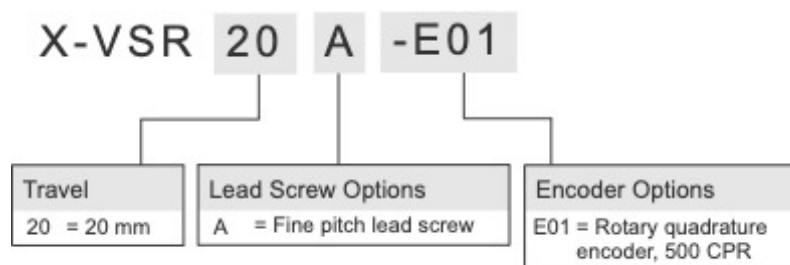
Zaber's X-VSR-E Series vertical lift stages are computer-controlled, stepper actuator driven platforms capable of moving 10 kg loads. They are stand-alone units requiring only a standard 48 V power supply.

An optional indexed knob provides convenient manual control for versatile operation even without a computer. 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.

Convenient locking, 4-pin, M8 connectors on the unit allow for secure connection between units. The X-VSR-E stages deliver exceptional travel and load capacity for their compact sizes, measuring only 73 mm tall when closed. With small footprints these stages can also mount directly onto Zaber's LST and LSQ-E series linear stages. Like all of Zaber's products, the X-VSR-E Series is designed to be 'plug and play' and very easy to set up and operate.

For more information visit: <https://www.zaber.com/products/vertical-stages/X-VSR-E>

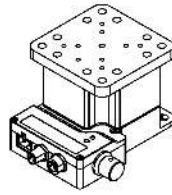
X-VSR-E Series Part Numbering



X-VSR-E Series Drawings

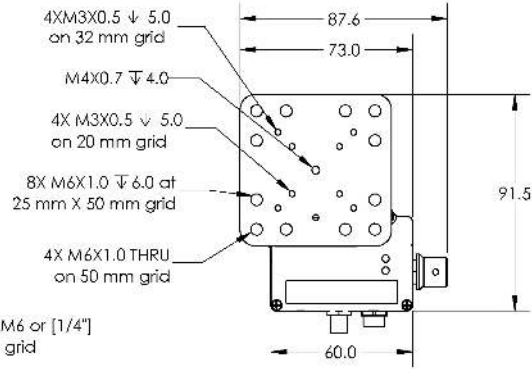
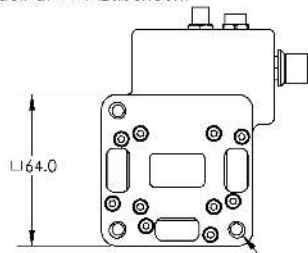
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X-VSR Vertical Lift Stage
 dimensions in mm

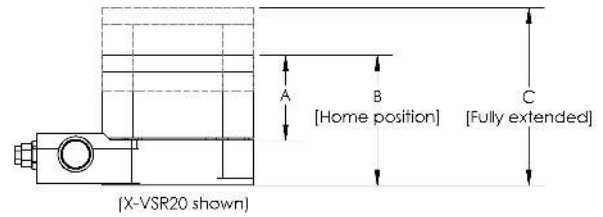
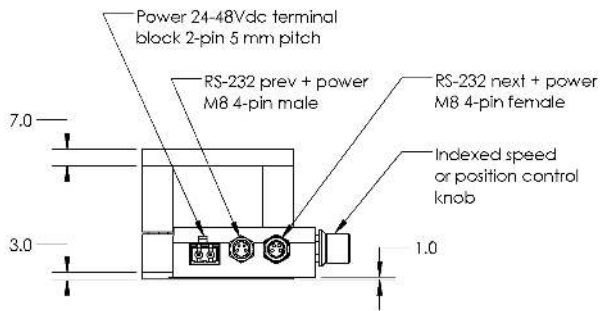


Model Number*	Travel	A	B	C
X-VSR20	20.0	36.0	55.0	75.0
X-VSR20-E	20.0	54.0	73.0	93.0
X-VSR40	40.0	66.0	85.0	125.0

*See product page for complete list of available models at www.zaber.com



3X mounting for M6 or [1/4"] on 50 mm or [2"] grid



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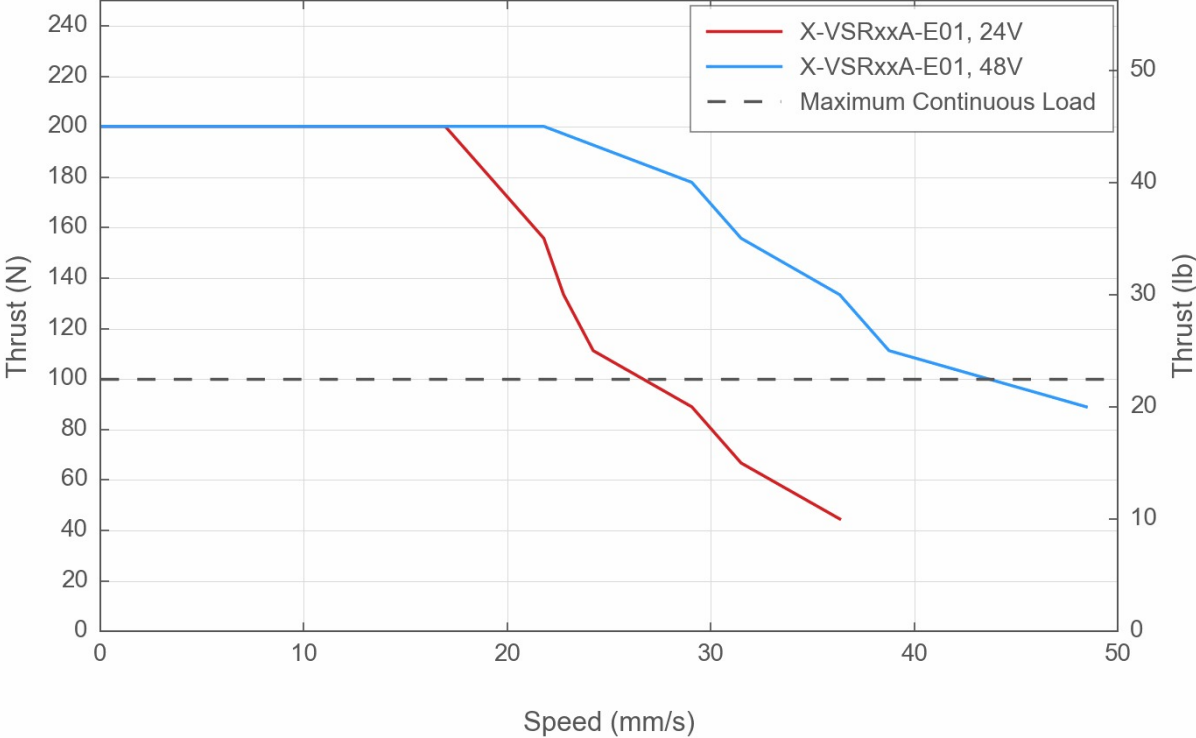
X-VSR-E Series Specifications

Specification	Value	Alternate Unit
Microstep Size (Default Resolution)	0.09525 μm	
Built-in Controller	Yes	
Travel Range	20 mm	0.787"
Accuracy (unidirectional)	50 μm	0.001968"
Loaded Accuracy (10 N)	35 μm	0.001378"
Repeatability	< 1 μm	< 0.000039"
Loaded Backlash (10 N)	< 10 μm	< 0.000394"
Backlash	< 35 μm	< 0.001378"
Maximum Speed	48 mm/s	1.890"/s
Minimum Speed	0.000058 mm/s	0.000002"/s
Speed Resolution	0.000058 mm/s	0.000002"/s
Encoder Resolution	500 CPR	2000 states/rev
Encoder Type	Rotary quadrature encoder	
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	
Maximum Centered Load	100 N	22.4 lb
Maximum Cantilever Load	300 N-cm	424.8 oz-in
Guide Type	Ball Bearing	
Horizontal Runout	< 30 μm	< 0.001181"
Pitch	0.12°	2.094 mrad
Roll	0.12°	2.094 mrad
Maximum Current Draw	950 mA	
Power Supply	24-48 VDC	
Power Plug	2-pin Screw Terminal	
Linear Motion Per Motor Rev	1.2192 mm	0.048"
Motor Steps Per Rev	200	
Motor Type	Stepper (2 phase)	
Motor Rated Current	1500 mA/phase	

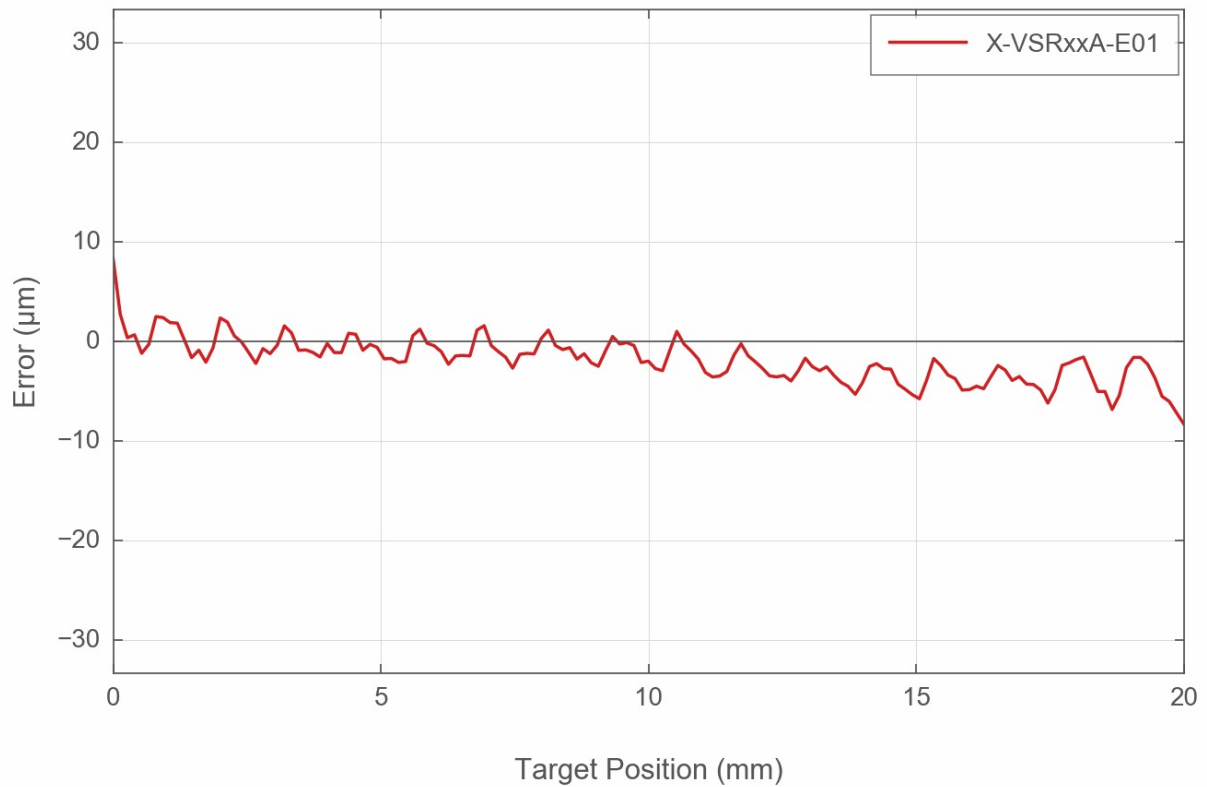
Specification	Value	Alternate Unit
Inductance	2.2 mH/phase	
Default Resolution	1/64 of a step	
Data Cable Connection	Locking 4-pin M8	
Mechanical Drive System	Precision Lead Screw	
Limit or Home Sensing	Magnetic home sensor	
Manual Control	Yes	
Axes of Motion	1	
Mounting Interface	M6 and M3 threaded holes	
Operating Temperature Range	0-50 °C	
Vacuum Compatible	No	
RoHS Compliant	Yes	
CE Compliant	Yes	
Weight	0.609 kg	1.343 lb

X-VSR-E Series Charts

Thrust Speed Performance



Typical Accuracy



Contact

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