

ASR100B120B-T3A Datasheet



- 50 mm up to 305 mm travel per axis
- Up to 12 μm accuracy; 2 μm repeatability; 85 mm/s speed
- Easily adjustable non-contact hall sensor limit switches
- Supported by $\mu\text{Manager}$ and MetaMorph® Microscopy Automation & Image Analysis Software
- Designed for use with an X-MCC2 Series stepper motor controller or any 2-phase stepper motor controller
- With AutoDetect, the X-MCC controller configures its settings automatically for the connected peripheral
- Custom versions available

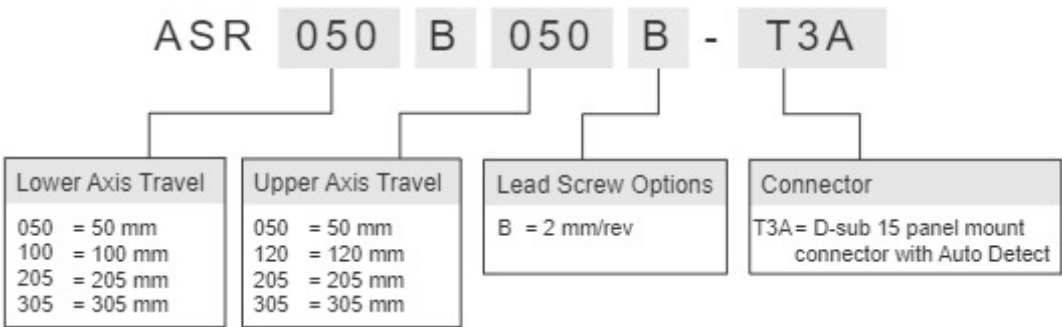
ASR Series Overview

Zaber's ASR series microscope stages combined with our X-MCC2 series multi-axis controllers are designed as replacements for manual stages on upright and inverted microscopes or for stand-alone operation as scanning stages. Set up is easy with AutoDetect. Once connected, the X-MCC controller will automatically detect and configure the ASR.

Mounting adaptors are available for breadboards and most common microscopes. Custom adaptors and plates are available upon request.

For more information visit: <https://www.zaber.com/products/scanning-microscope-stages/ASR>

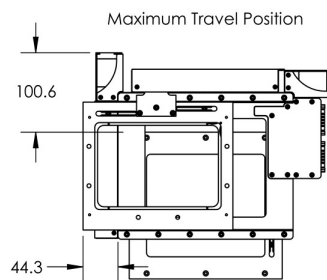
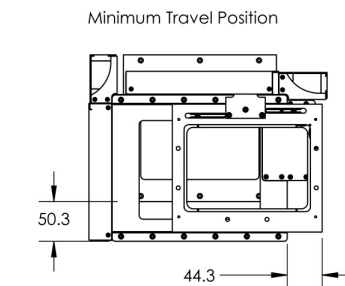
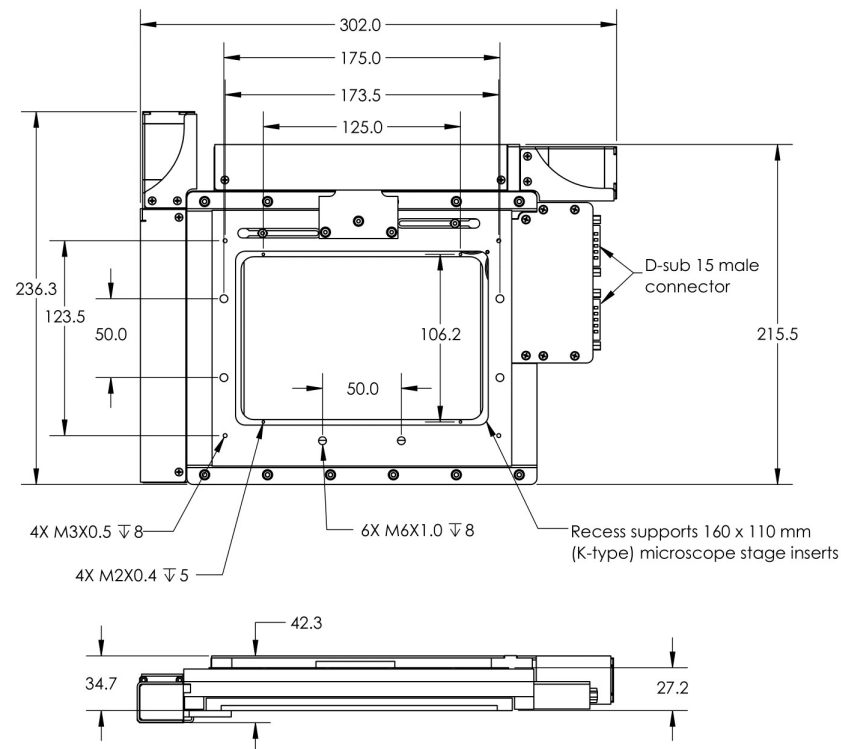
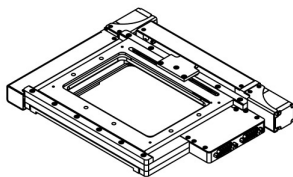
ASR Series Part Numbering



ASR100B120B-T3A Drawings

ZABER
ASR Motorized XY Microscope Stage
dimensions in mm

Adaptor plates required for mounting in most applications.
See accessories page for details at www.zaber.com.



DWG 1111 R02A

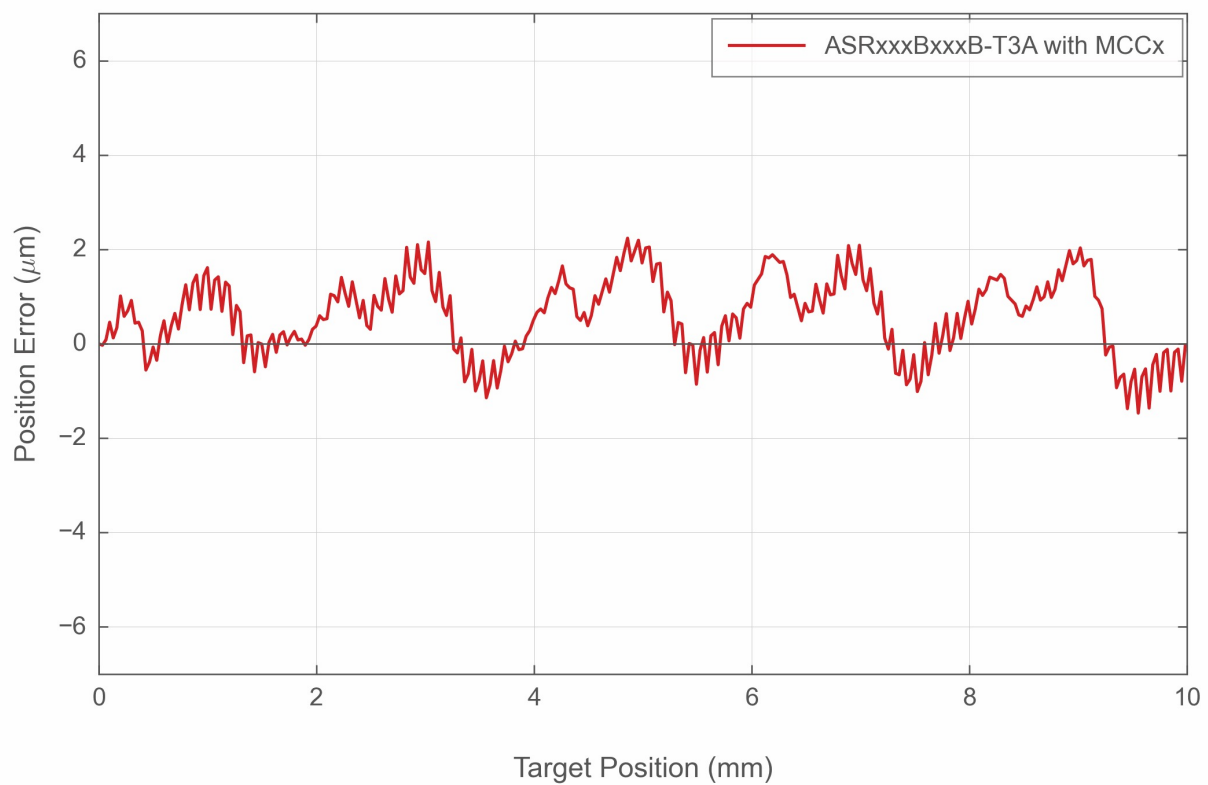
ASR100B120B-T3A Specifications

Specification	Value	Alternate Unit
Microstep Size (Default Resolution)	0.15625 μ m	
Built-in Controller	No	
Recommended Controller	X-MCC2 (48 V) Recommended	
AutoDetect	Yes	
Lower Travel Range	100 mm	3.937"
Upper Travel Range	120 mm	4.724"
Accuracy (unidirectional)	40 μ m	0.001575"
Repeatability	< 2 μ m	< 0.000079"
Flatness	20 μ m	0.0008"
Backlash	< 4 μ m	< 0.000157"
Maximum Speed	85 mm/s	3.346"/s
Minimum Speed	0.000095 mm/s	0.000004"/s
Speed Resolution	0.000095 mm/s	0.000004"/s
Peak Thrust	95 N	21.3 lb
Maximum Continuous Thrust	95 N	21.3 lb
Maximum Centered Load	100 N	22.4 lb
Guide Type	Crossed roller bearing	
Pitch	0.02°	0.349 mrad
Roll	0.02°	0.349 mrad
Yaw	0.005°	0.087 mrad
Linear Motion Per Motor Rev	2.00 mm	0.079"
Motor Steps Per Rev	200	
Motor Type	Stepper (2 phase)	
Motor Rated Current	1500 mA/phase	
Motor Winding Resistance	2.05 ohms/phase	
Inductance	1 mH/phase	
Motor Connection	D-sub 15	
Default Resolution	1/64 of a step	
Mechanical Drive System	Precision lead screw	
Limit or Home Sensing	Magnetic, adjustable home and away sensors	

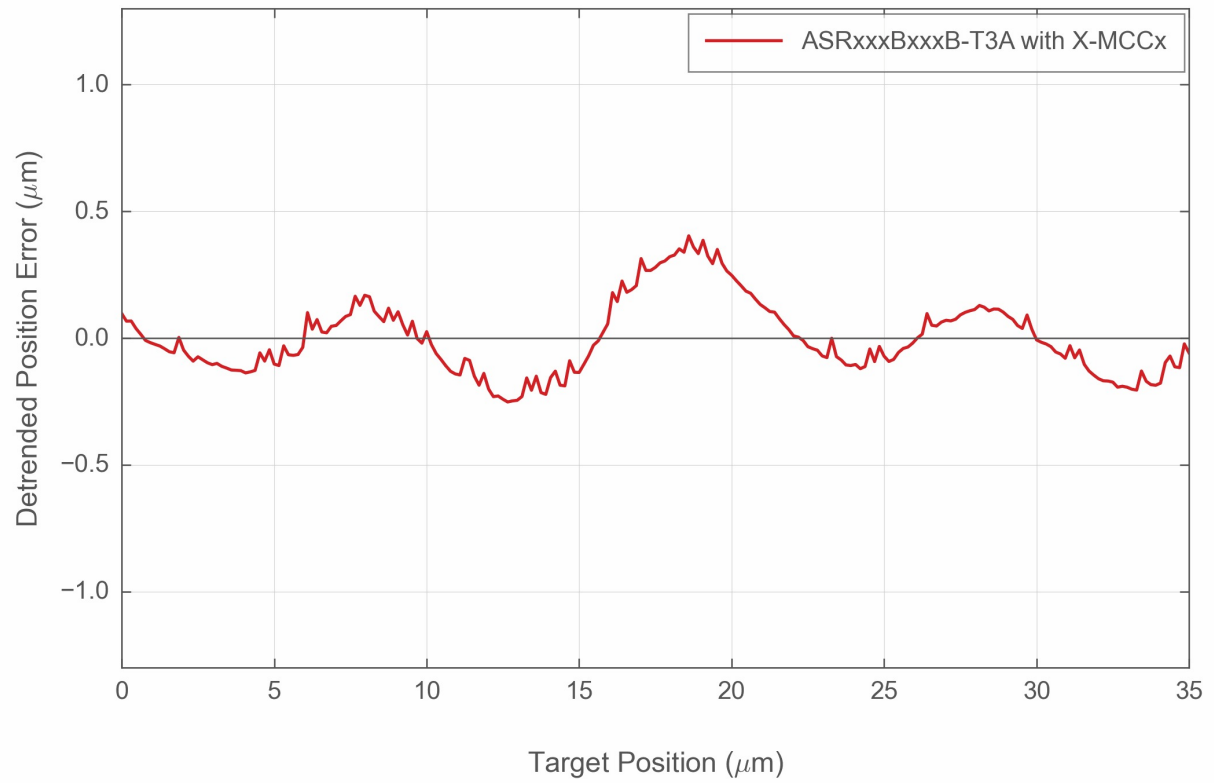
Specification	Value	Alternate Unit
Axes of Motion	2	
Mounting Interface	Separate mounting adaptors available	
Operating Temperature Range	0 to 50 °C	
RoHS Compliant	Yes	
CE Compliant	Yes	
Vacuum Compatible	No	
Weight	3 kg	6.614 lb

ASR Series Charts

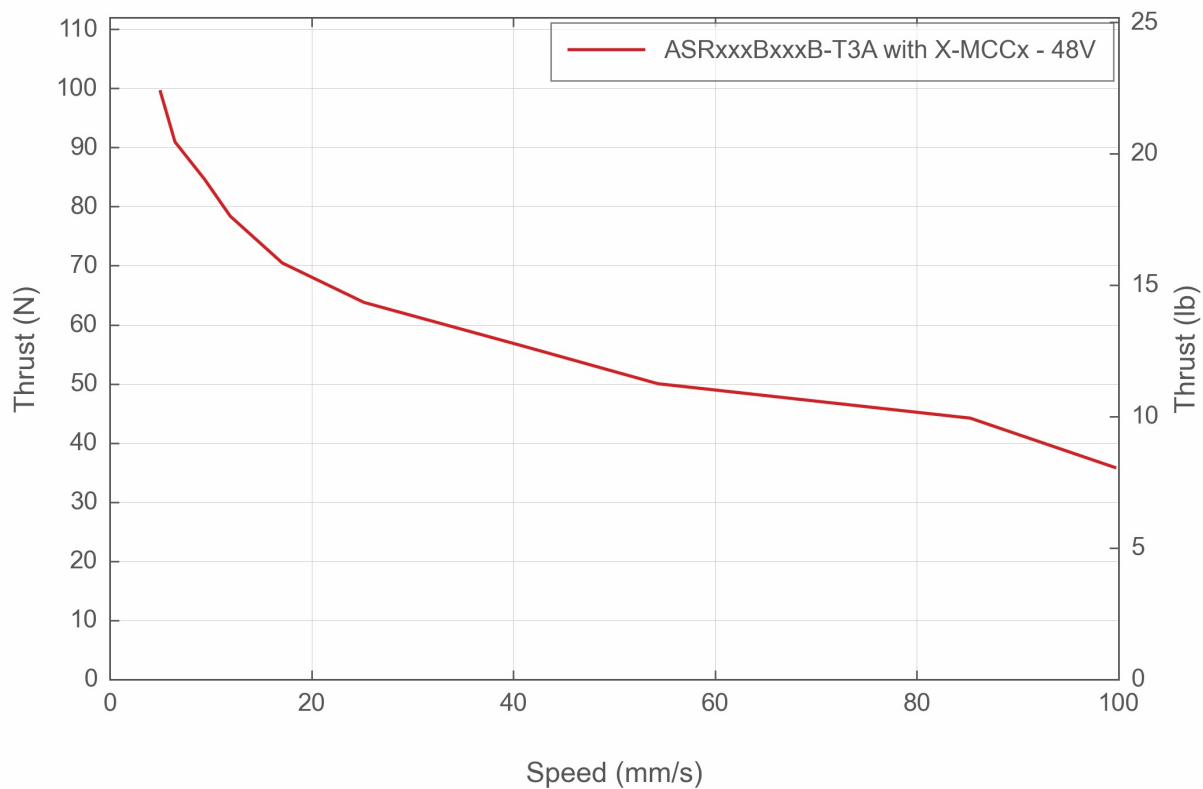
Typical Accuracy



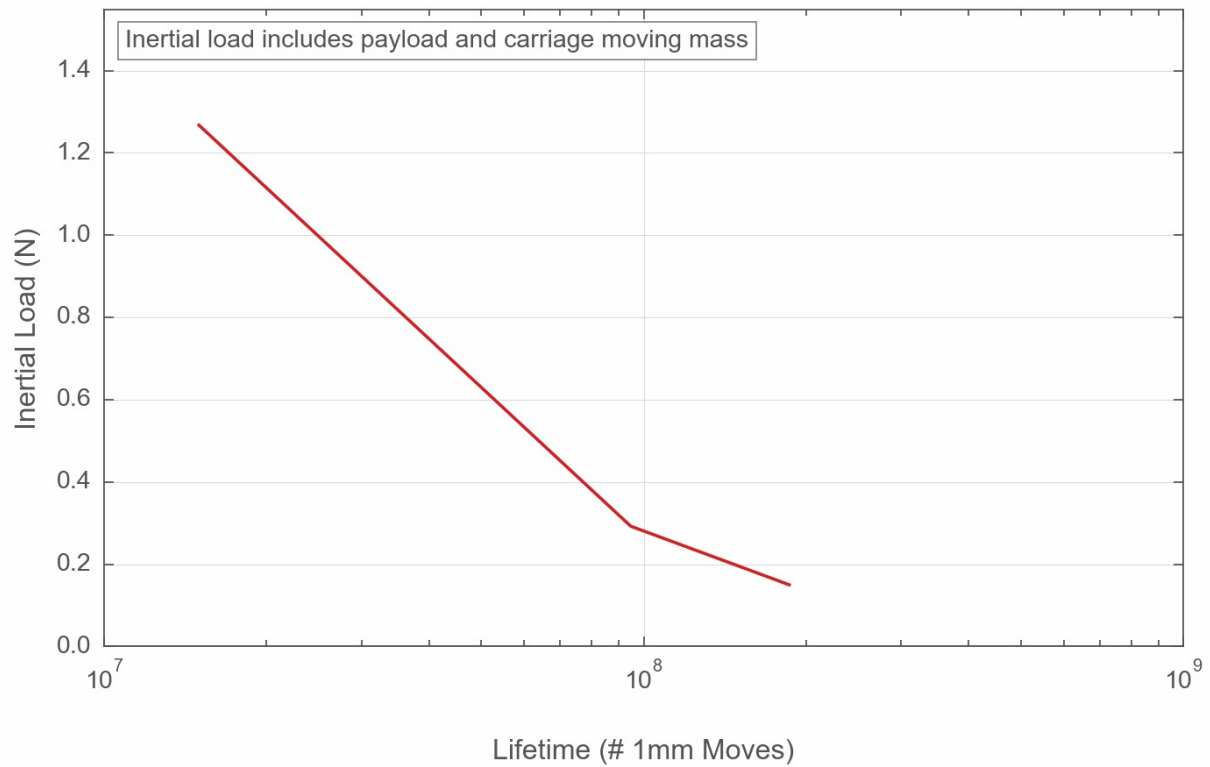
Typical Microstepping Accuracy



Thrust Speed Performance



Typical ASR Bearing Lifetime



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