

RST120AK-T3A Datasheet



- Speed up to 60°/s and torque up to 70 N-m
- Continuous 360° rotation stage
- Up to 300 kg centered load capacity
- 50.8 mm (2") or 101.6 mm (4") aperture
- Designed for use with MCC Family controllers or any 2-phase stepper motor controller
- With AutoDetect, Zaber controllers automatically configure settings for the connected peripheral
- Custom versions available

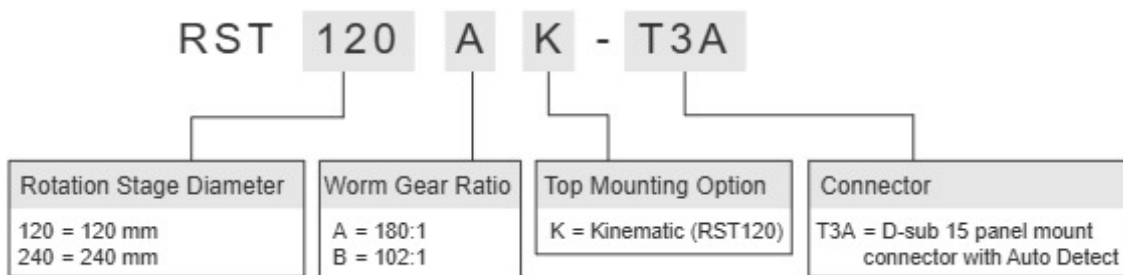
RST Series Overview

Zaber's RST Series products are motorized rotation stage devices. Rated for up to 300 kg centered load capacity and up to 70 N-m of torque, they are ideal for high load, angular positioning applications. They have large diameter apertures for a variety of thru-bore applications. RST stages are designed for plug-and-play use with any of Zaber's controllers.

The stages are designed to connect directly to our MCC Family universal motor controllers, or they can be used with any 2-phase stepper motor controller through the panel mount DB15 connector. Set up is easy with AutoDetect. Once connected, the controller will automatically detect and configure the RST.

For more information visit: <https://www.zaber.com/products/rotary-stages/RST>

RST Series Part Numbering & Options



RST120AK-T3A Drawings

- [RST120.png \(Drawing for the RST120\)](#)

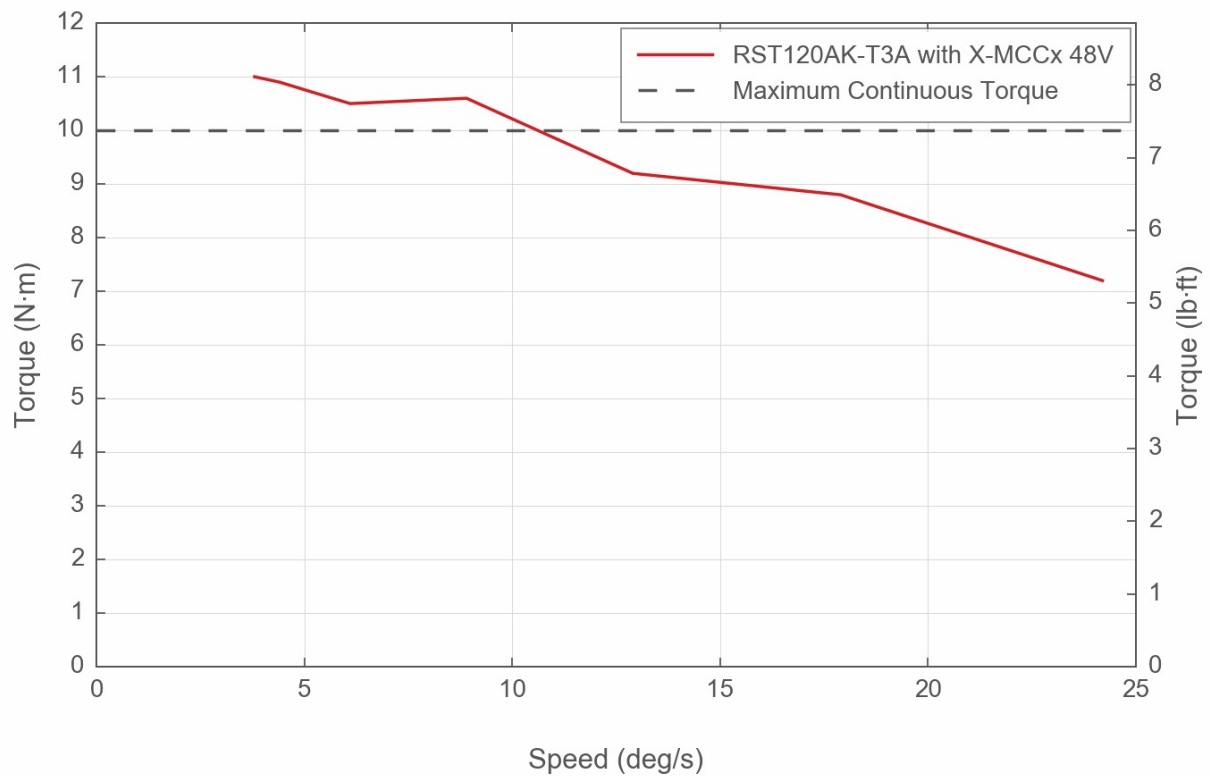
RST120AK-T3A Specifications

Microstep Size (Default Resolution)	0.00015625° (2.727 μrad)
Built-in Controller	No
Recommended Controller	MCC (48 V) Recommended
AutoDetect	Yes
Range	360°
Accuracy (unidirectional)	0.16° (2.792000 mrad)
Repeatability	< 0.005° (< 0.087 mrad)
Backlash	< 0.05° (< 0.873 mrad)
Maximum Speed	24°/s (4 rpm)
Minimum Speed	0.000095°/s (1.658 μrad/s)
Speed Resolution	0.000095°/s (1.658 μrad/s)
Encoder Type	No
Maximum Torque	1000 N-cm (1416.1 oz-in)
Maximum Continuous Torque	1000 N-cm (1416.1 oz-in)
Maximum Centered Load	500 N (112.1 lb)
Maximum Moment (Transverse)	2000 N-cm (2832.2 oz-in)
Stage Top Dimension	120 mm (4.724")
Radial Error Motion	+/- 3 μm (+/- 0.000118")
Axial Error Motion	< 3 μm (< 0.000118")
Tilt Error Motion	+/- 0.0014° (+/- 24.43 μrad)
Bearing Plane Offset	27.1 mm (1.067")
Angular Motion Per Motor Rev	2°
Motor Steps Per Rev	200
Motor Type	Stepper (2 phase)
Motor Rated Current	1500 mA/phase
Motor Winding Resistance	2.4 ohms/phase
Inductance	6.6 mH/phase
Motor Connection	D-sub 15
Default Resolution	1/64 of a step
Maximum Angular Momentum	0.4 kg-m ² /s
Motor Frame Size	17

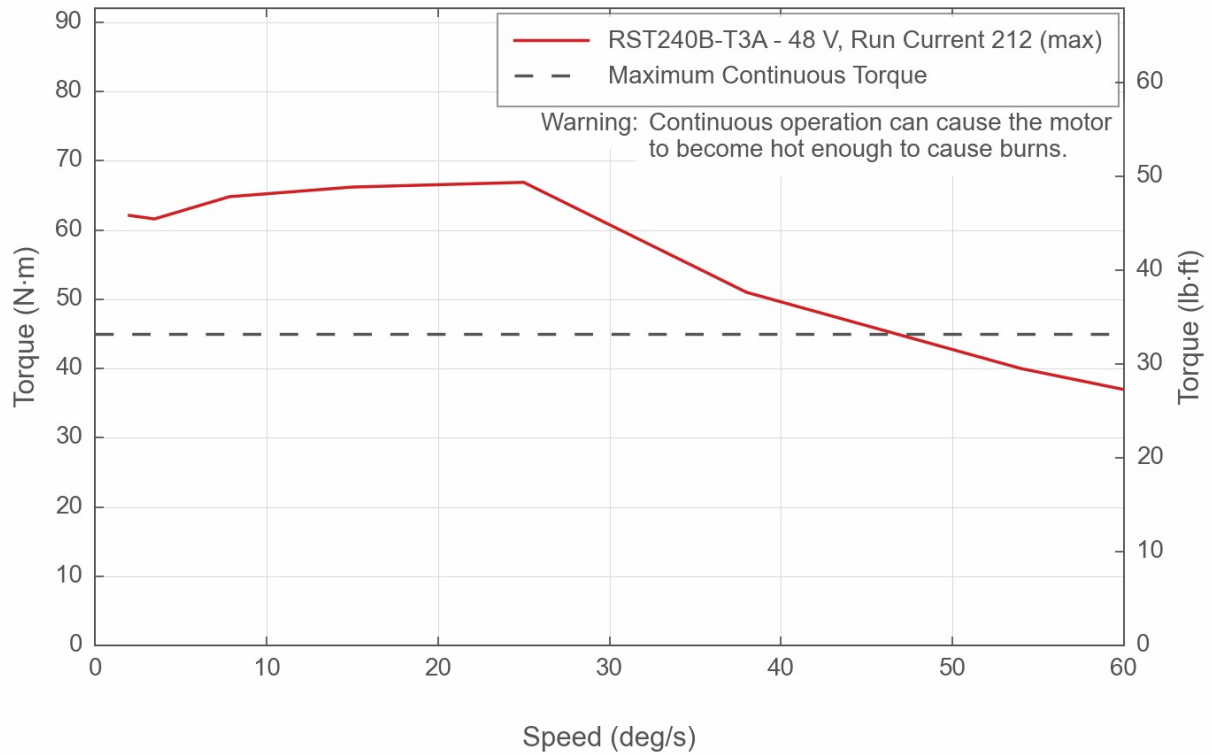
Microstep Size (Default Resolution)	0.00015625° (2.727 μrad)
Guide Type	Preloaded Ball Bearing
Mechanical Drive System	Precision Worm Gear
Limit or Home Sensing	Magnetic home sensor
Gear Ratio	180:1
Mounting Interface	Kinematic with M2.5 and M6 threaded holes
Operating Temperature Range	0-50 °C
CE Compliant	Yes
Vacuum Compatible	No
Weight	2.40 kg (5.291 lb)

RST Series Charts

Torque Speed Performance



Torque Speed Performance



Contact

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