

## RST120AK-DE50T10A Datasheet



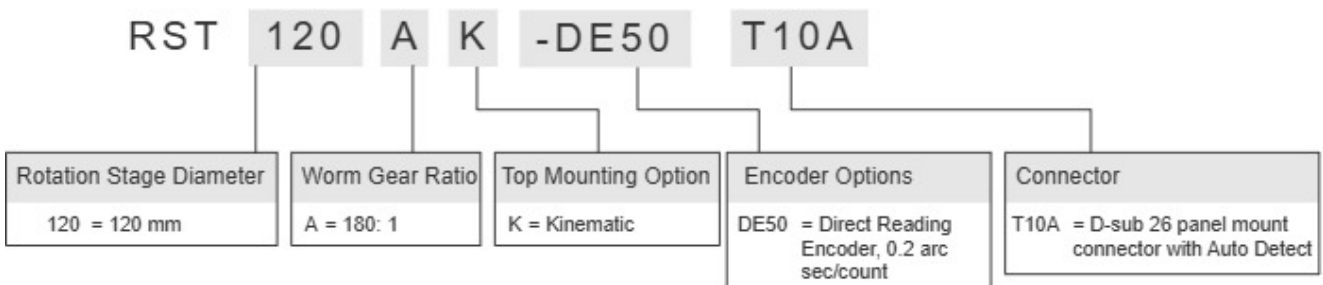
- Speed up to 24 °/s and torque up to 10 N-m
- 50.8 mm (2 inch) aperture with kinematic mounting options for repeatability of assembly
- 50 kg centered load capacity
- Continuous 360° rotation stage
- Direct reading encoder for position correction; stage accuracy to 0.01°
- Designed for use with an X-MCC 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

## RST-DE Series Overview

Zaber's RST-DE Series products are motorized rotation stages with built-in direct reading encoders for high accuracy motion. Rated for a 50 kg centered load capacity and 10 N-m of torque, they are ideal for high load, angular positioning applications. RST-DE stages are designed for plug-and-play use with any of Zaber's controllers. Set up is easy with AutoDetect. Once connected, the X-MCC controller will automatically detect and configure the RST-DE.

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

## RST-DE Series Part Numbering & Options



## RST120AK-DE50T10A Drawings

- [RST-DE50T10A.png \(Drawing for the RST-DE50T10A\)](#)

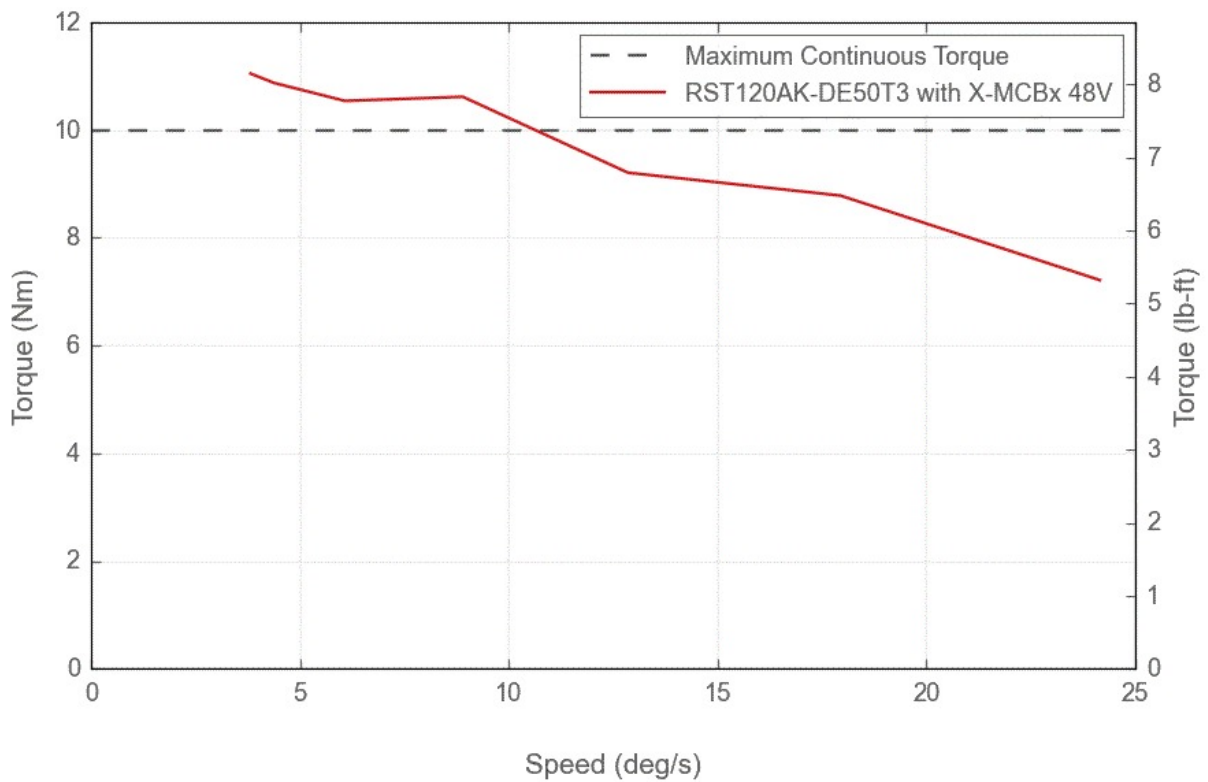
## RST120AK-DE50T10A Specifications

<b>Microstep Size (Default Resolution)</b>	<b>0.00015625° (2.727 µrad)</b>
Built-in Controller	No
Recommended Controller	X-MCC (48 V) Recommended
AutoDetect	Yes
Range	360°
Accuracy (unidirectional)	0.01° (0.174500 mrad)
Repeatability	< 0.005° (< 0.087 mrad)
Backlash	< 0.005° (< 0.087 mrad)
Maximum Speed	24°/s (4 rpm)
Encoder Count Size	0.00005556°/count (0.200016 arcseconds/count)
Minimum Speed	0.000095°/s (1.658 µrad/s)
Speed Resolution	0.000095°/s (1.658 µrad/s)
Encoder Resolution	1620000 CPR (6480000 states/rev)
Encoder Type	Direct Reading Optical Encoder
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	27.11 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 26
Default Resolution	1/64 of a step

<b>Microstep Size (Default Resolution)</b>	<b>0.00015625° (2.727 μrad)</b>
Maximum Angular Momentum	0.4 kg-m <sup>2</sup> /s
Mechanical Drive System	Precision Worm Gear
Limit or Home Sensing	Magnetic home sensor
Operating Temperature Range	0-50 °C
CE Compliant	Yes
Vacuum Compatible	No
Weight	2.46 kg (5.423 lb)

## RST-DE Series Charts

### Torque Speed Performance



## Contact

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