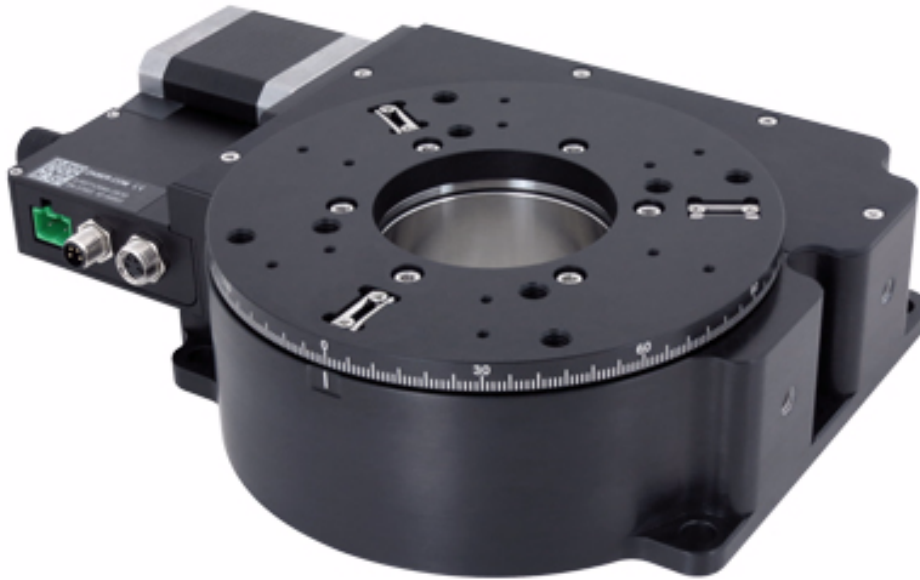


X-RST-DE Series: High precision motorized rotary stages with built-in controllers and direct encoders



- Direct reading encoder for position correction; stage accuracy to 0.01 degrees
- 50.8 mm (2 inch) aperture with kinematic mounting options for repeatability of assembly
- 50 kg centered load capacity
- Speed up to 24 deg/s; torque up to 10 N-m
- Built-in controller; daisy-chains with other Zaber products
- Multiple X-Series products in a daisy-chain can share a single power supply

Product Description

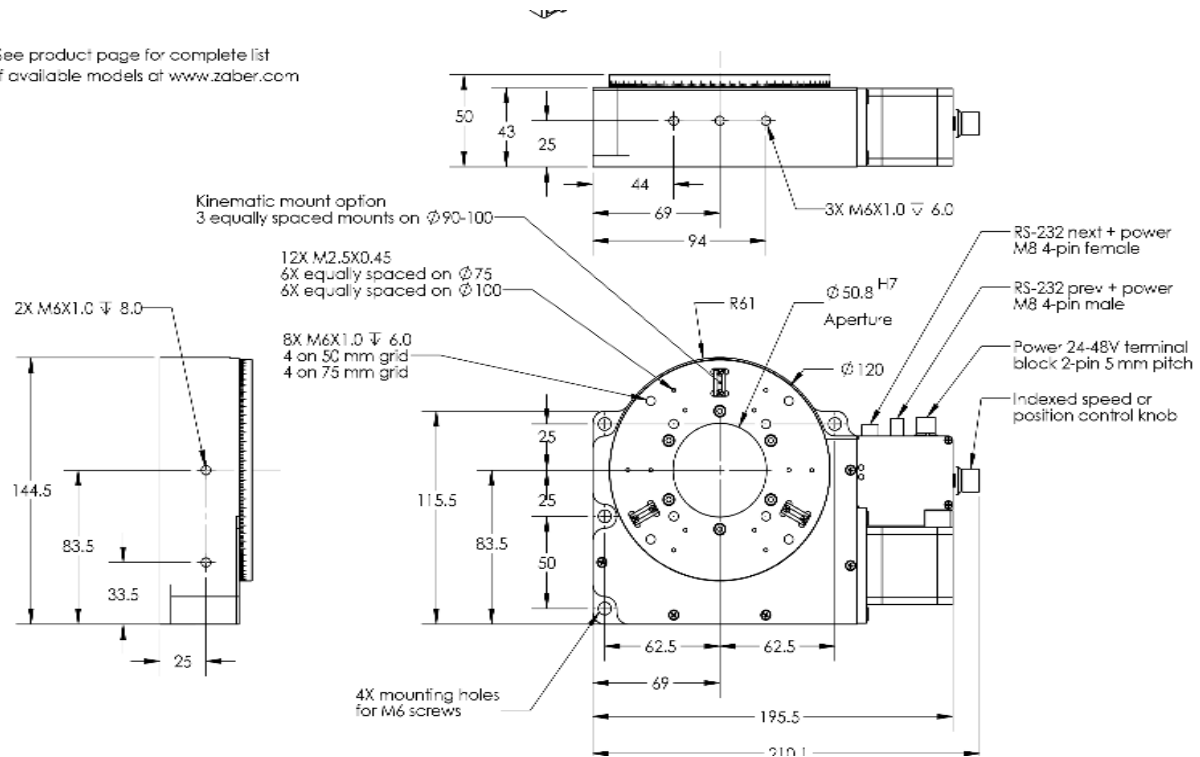
Zaber's X-RST-DE Series products are motorized rotation stage devices with built-in controllers and direct reading encoders for high accuracy motion. Rated for a 50 kg centered load capacity and 10 N-m of torque, they are ideal for high load, high precision, angular positioning applications.

They are stand-alone units requiring only a standard 24-48 V power supply. An indexed knob provides smooth manual control at variable speeds in both directions for versatile operation even without a computer. Press and hold to switch between velocity mode and position mode, turn to move the stage, and press to stop.

The stages connect to the USB 2.0 or RS-232 port of any computer and can be chained with several units per chain. They can be chained with any other Zaber products. Convenient locking, 4-pin, M8 connectors on the unit allow for easy and secure connection. The chain also shares power, so multiple X-Series products can use a single power supply.

Dimension Drawings

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



Product Specifications

| Specification | Value | Alternate Unit |
|-------------------------------------|-------------------------------------|------------------------|
| Microstep Size (Default Resolution) | 0.00015625 degrees | 2.727 urad |
| Built-in Controller | Yes | |
| Range | 360 degrees | |
| Accuracy (unidirectional) | 0.01 degrees | 0.174500 mrad |
| Repeatability | < 0.005 degrees | < 0.087 mrad |
| Backlash | < 0.005 degrees | < 0.087 mrad |
| Maximum Speed | 24 deg/s | 4.0 rpm |
| Minimum Speed | 0.000095 deg/s | 1.658 urad/s |
| Encoder Resolution | 16200 CPR | 6,480,000 states/rev |
| Encoder Count Size | 0.00005556 deg/count | 0.200016 arc sec/count |
| Encoder Type | Direct reading optical encoder | |
| Communication Interface | RS-232 | |
| Communication Protocol | Zaber ASCII (Default), Zaber Binary | |
| Maximum Continuous Torque | 1000 N-cm | 1,416.1 oz-in |
| Maximum Centered Load | 500 N | 112.1 lb |
| Maximum Cantilever Load | 2000 N-cm | 2,832.2 oz-in |
| Stage Diameter | 120 mm | 4.724 " |
| Maximum Current Draw | 1100 mA | |
| Power Supply | 24-48 VDC | |
| Power Plug | 2-pin Screw Terminal | |
| Motor Steps Per Rev | 200 | |
| Motor Type | Stepper (2 phase) | |
| Inductance | 6.6 mH/phase | |
| Maximum Angular Momentum | 0.4 kg-m ² /s | |
| Default Resolution | 1/64 of a step | |
| Data Cable Connection | Locking 4-pin M8 | |
| Mechanical Drive System | Precision Worm Gear | |
| Limit or Home Sensing | Magnetic home sensor | |
| Manual Control | Yes | |
| Operating Temperature Range | 0-50 degrees C | |
| RoHS Compliant | Yes | |
| CE Compliant | Yes | |

| Specification | Value | Alternate Unit |
|---------------|---------|----------------|
| Weight | 2.46 kg | |

Specification Charts

Torque Speed Performance

