

## RCS-090-ER8 Datasheet

### Direct-Drive Rotary Stage with Pneumatic ER8 Collet Actuation

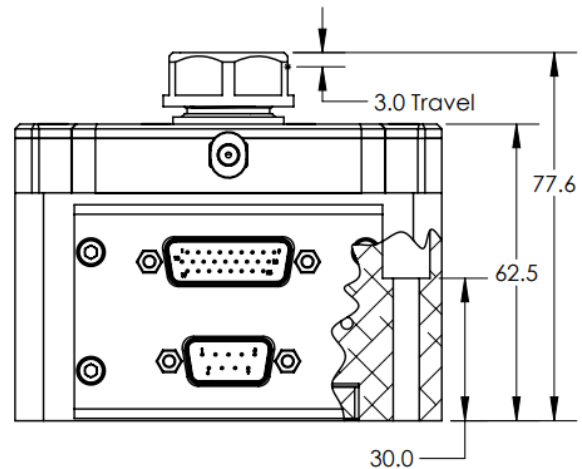
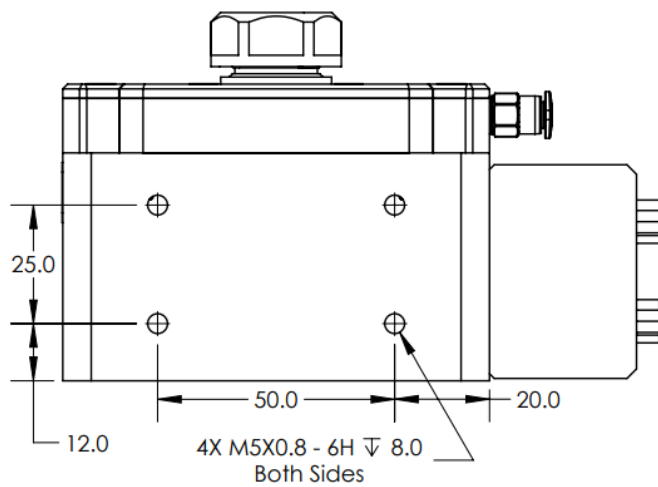
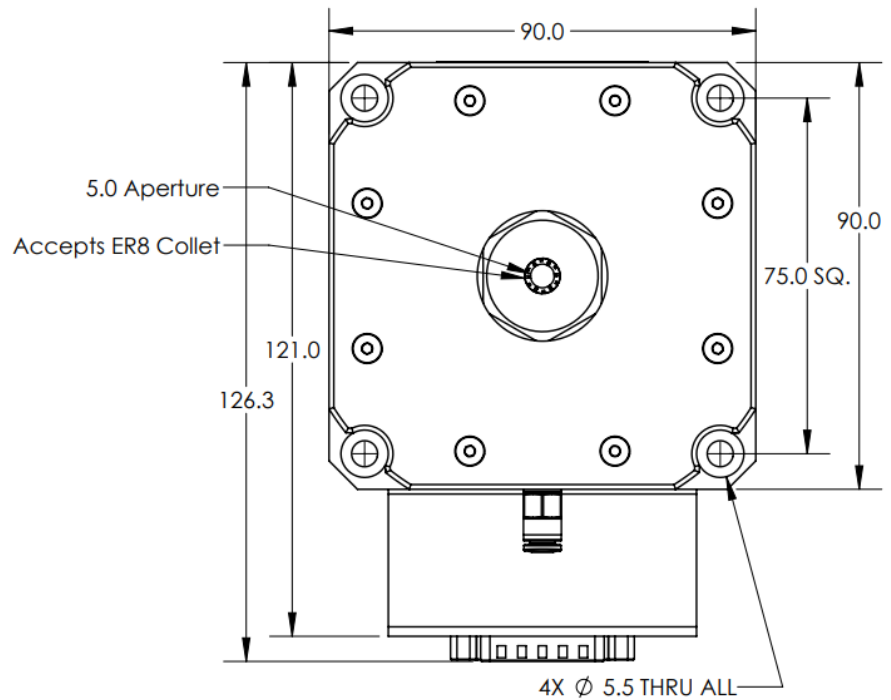
#### FEATURES

- Continuous 360° rotation
- High resolution encoder
- Brushless DC motor
- Ø 5.00mm through bore
- Spring-close, air-open collet
- Accepts ER8 type collets



The RCS-090 is a compact, high-precision rotary stage engineered for laser tube processing applications where space is at a premium. It features an integrated ER8 collet system with automatic gripping and adjustable clamping force to accommodate small-diameter parts across a range of materials and wall thicknesses. Its direct-drive rotary architecture delivers smooth, accurate, near zero-backlash motion for demanding cutting and welding operations. Contact us to learn how the RCS-090 can integrate into your laser processing system.

## RCS-090-ER8 Dimensions



## RCS-090-ER8 Options and Specs

| RCS-090 Ordering Options |   |
|--------------------------|---|
| Product Series           | RCS: Rotary Stage with Integrated Collet Actuation  |
| Stage Profile Size       | 090: 90mm Square Profile  |
| Motor Code               | AC: Brushless DC, Direct Drive  |
| Encoder Disk             | M: Glass Disk, 18,000 Lines per Revolution, Incremental   |
| Encoder Feedback         | C: RS422, 25X Interpolation (1,800,000 counts/rev)<br>D: RS422, 100X Interpolation (7,200,000 counts/rev)<br>E: 1Vpp Sin-Cos (18,000 sine periods/rev) <sup>1</sup> |
| Collet Compatibility     | ER8 (up to 5mm OD Gripping)   |
| Additional Options       | 0: No Additional Options  |
| Customizations           | 00: Standard Product<br>01-99: Custom Stage, Customer Specific <sup>1</sup>   |
| Example Part Number      | RCS-090-AC-M-D-ER8-0-04   |
| Notes                    | 1: Common customizations include: Stainless Hardware and cleanroom preparation  |

| RCS-090-ER8 Specifications                          |   |
|---|---|
| Accuracy ( $\pm$ arc-sec) <sup>1</sup>              | 30  |
| Bi-Directional Repeatability (arc-sec) <sup>1</sup> | 4.0   |
| Axial Runout ( $\mu$ m) <sup>2</sup>                | 30  |
| Radial Runout ( $\mu$ m) <sup>2</sup>               | 30  |
| Continuous Torque (Nm)                              | 0.54  |
| Peak Torque (Nm)                                    | 1.08  |
| Rotational Inertia (kg·m <sup>2</sup> )             | 0.00034                                     |
| Stage Mass (kg)                                     | 1.5   |
| Air Pressure (PSI)                                  | 60-90                                       |
| Required Air Quality                                | Dry Air, 1 $\mu$ m Maximum Particulate Size |

Notes:  
1: Specification is verified via laser interferometer on every stage  
2: Specification may be verified upon request, additional charges may apply

| RCS-090-ER8 Maximum Velocity |  |
|------------------------------|--|
| Encoder Output Code          | Max Velocity ( $^{\circ}$ /s) <sup>1</sup> |
| C                            | 3120                                       |
| D                            | 720  |
| E                            | 3600                                       |

Notes:  
1: The true maximum velocity of a rotary stage is dependent on the controls system as well as the stage

