

Rotary Motion Systems

ALIO Industries has developed TRUE NANO® precision rotary stages to meet and exceed today's demand for high precision rotary motion. Our line of rotary stages continues to expand as we are willing to work with our customers to provide solutions that meet all their needs.

Click on thumbnails to enlarge



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Mechanical Rotary Stages

Mechanical bearing rotary stages have been designed with crossed roller bearings for improved stiffness for offset loads and rotational precision. Integrated with servo torque frameless motors these stage can handle most application where the mass and acceleration needs are extreme while still maintaining our nano precision performance. The ALIO attention to materials and machining is maintained in the rotary product line as with the linear products making sure the bearings and metal are located in ultra-machined parallel surfaces as shown by the machined lands on all stages.

ALIO rotary stages have standard with 0.2 arc-second repeatability with the ALIO supplied motion controllers. Standard mechanical crossed roller bearings are rated at 13 to 20 microns of radial and axial run-out with optional run-outs of certain models below 5 microns.

The mechanical bearing rotary stage family has multiple motor sizes to meet duty cycles as well as mass and acceleration needs from 80 mm to 300 mm in diameter.

Vacuum Rotary Union options are available on the inner diameter for mounting a Vacuum Chuck.



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Low-Angle Mechanical Rotary Stages

Mechanical bearing rotary stages have been designed with angular contact bearings for the most compact design on the market. Integrated with servo ironless motors these stages best fit metrology applications where small angular adjustment is needed with nano precision performance. The ALIO attention to materials and machining is maintained in the rotary product line as with the linear products making sure the bearings and metal are located in ultra-machined parallel surfaces as shown by the machined lands on all stages.

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Air Bearing Rotational Stages

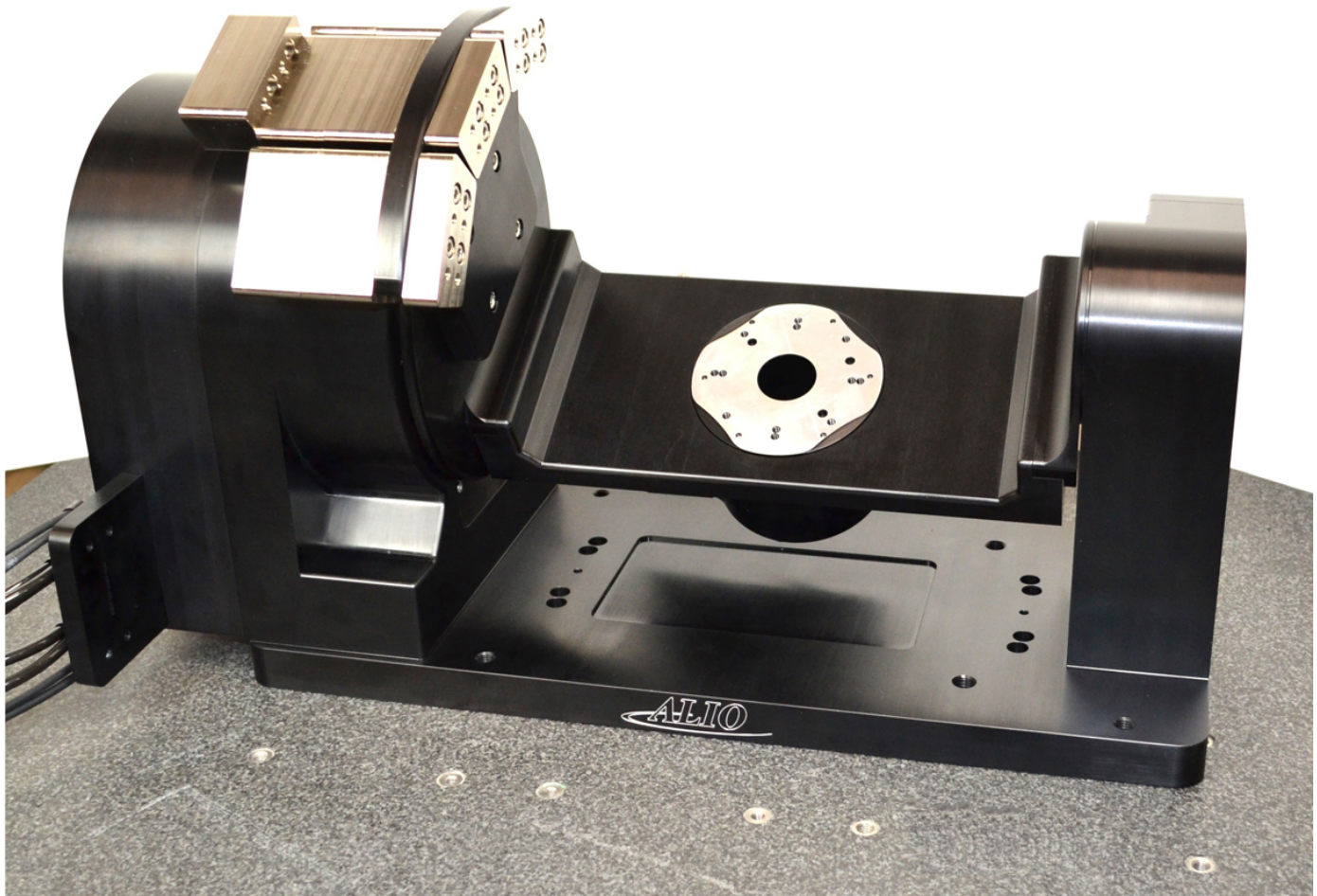
When ultra-tight run-out precision motion is needed, customers can choose from our continually growing line of air bearing rotary stages. Whether it is exceptional stiffness or cost effective motion, ALIO can offer a variety of options to meet the needs of today's nano-precision applications.

Vacuum Rotary Union options are available on the inner diameter for mounting a Vacuum Chuck.

DUAL AXIS ROTARY SYSTEMS

ALIO's two-axis systems are designed around the customers' mass with variable counterbalance, cable guidance, cable and air feed-through capabilities. With hard-stops allowing for ± 110 and ± 170 degrees of rotation for nearly unlimited part access on the horizontal axis. Angular travel ± 180 for the rotation about the vertical axis.

Contact ALIO with your specs, motion requirements, and budget to get pricing today.



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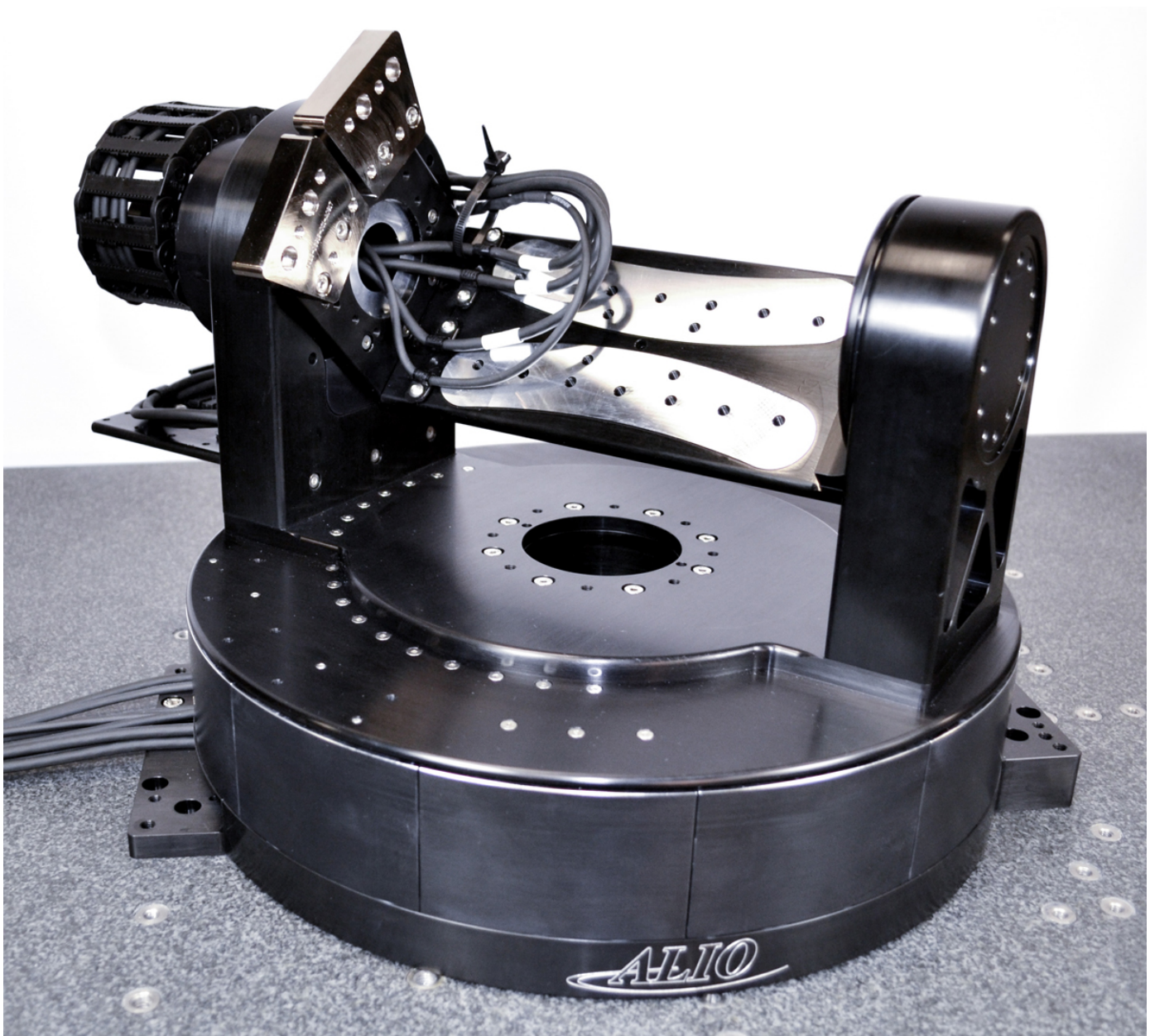
TWO-AXIS GIMBAL

Incorporating ALIO's industry-leading torque ratings, these rotary systems are capable of high rotational speeds while maintaining the stand-out precision levels you can expect from ALIO systems.

Metrology, Laser Processing, Additive Manufacturing, and many other industries have benefited from these ALIO products. Let us help you integrate these to your precision motion system.

Air purge is incorporated for contaminant protection and longer life. Internal cable and air line routing provide an extremely clean finished product.

Vacuum Rotary Union option is available for customers who want to incorporate a Vacuum Chuck.



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AZ-EL Rotary Assembly

Incorporating ALIO's industry-leading torque ratings, these rotary systems are capable of high rotational speeds while maintaining the stand-out precision levels you can expect from ALIO systems.

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