

A Guide To Custom Rotary Stages

ServoBelt Rotary and Direct Drive Theta Modifications

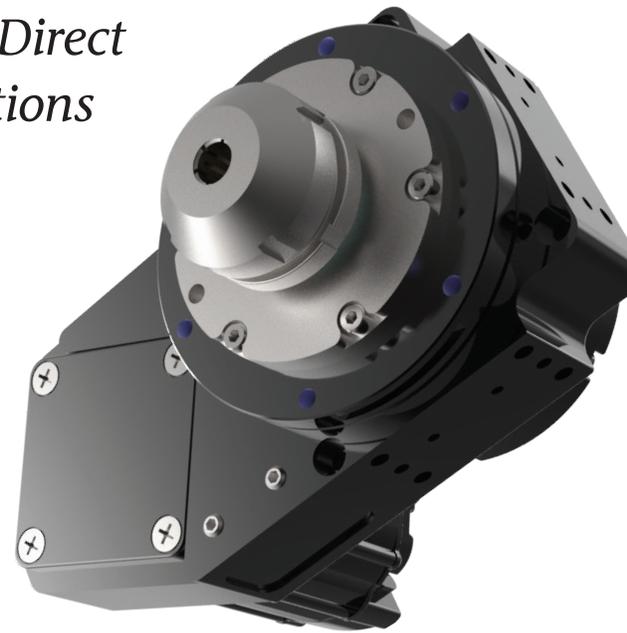
While off-the-shelf rotary stages will do the job in most cases, sometimes your application requirements call for a customized stage. It may be something as simple as a special bolt-hole pattern on the top of the stage. Or you may need a way to secure a workpiece in the stage center opening. Or you may need to squeeze a rotary positioning device into a tight space.

Whatever your requirements, we can help.

We've introduced accessories and modular design features that make it easy to customize our standard Servo-Belt Rotary (SBR) and Direct Drive Theta (DDT) rotary stages. And in cases where our standard rotary platforms can't be modified to fit your requirements, we can often design and build one-of-a-kind rotary motion systems to your specifications.

Rotary Stage Customizations. Our customizations, many of which add no lead time to the stage, fall into six broad categories:

- **Mounting Flexibility.** Custom bolt-hole patterns and other machined mounting features are the simplest and most common stage customizations. We can modify the tops and mounting surfaces of all our SBR and DDT models.



Harsh Environment
Wafer Chuck Rotator

LARGE THROUGH HOLES FOR EASY INTEGRATION

Many of our SBR rotary stages feature an extra-large through hole, making it easy to pass power, signal, pneumatic, optical and other connections through the center of the stage. The large through hole also allows a tight integration between the positioning stage and related inspection, laser or robotic systems.

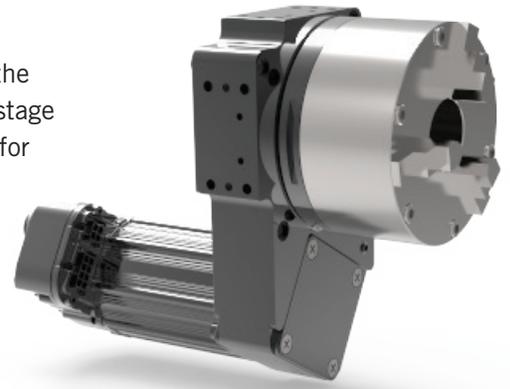


STANDARD THROUGH HOLES FOR COST SAVINGS

SBR rotary stages with standard-sized through holes offer a more economical choice when fewer utilities need to pass through the center of the stage.



- **Workholding Solutions.** Oftentimes the most difficult part of using a rotary stage is securing devices to the stage top for tasks such as inspection, laser marking or CNC cutting. We've introduced a new and growing line of workholding accessories that mount seamlessly into our rotary stages. These include air-actuated collet closer and three-jaw chuck to secure a variety of items.

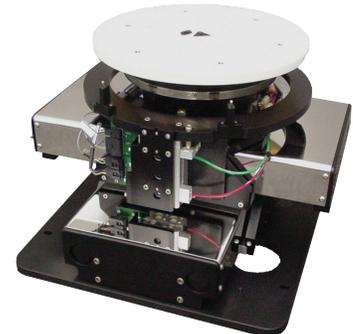


Three-Jaw Chuck

- **Optimized Form Factor.** Our standard stages are compact—both in profile and footprint. But sometimes you need a rotary positioning stage that has to fit in tight or oddly-shaped spaces. Our custom rotary positioning devices have met difficult space constraints on a variety of semiconductor, military and medical machines.
- **Challenging Environments.** From vacuum systems to less-than-clean manufacturing processes, our stages can be hardened and sealed to run reliably in environments that would shorten the life of an unprotected stage.
- **Drive options.** All of our stages can be set up with the third-party motors and controls of your choosing. Help with motor sizing is always available from our engineering team.
- **Extra Precision and Accuracy.** For applications with the most stringent run-out and parallelism requirements, we can precision machine tops of fully assembled stages. We often go through this extra manufacturing step for stages used in metrology or semiconductor manufacturing.



CNC Assembly for Dental Mill



Semiconductor Metrology

→ Buy and configure rotary stages online at buyrotarystage.bell-everman.com