



Combined Cantilever/Bend  
ELF 3300-AT

## Medical Device Torsion Testing

Medical devices often experience multi-modal loading in vivo. In addition to axial loading, they can also experience torsion and bending. Over the years, MDT has performed hundreds of torsional testing applications and has developed a toolbox of test fixtures and techniques for these applications. This month's [whitepaper](#) highlights four different device testing examples of torsion testing.

## Testing Tip: Acute Particulate Testing

Our most recent [testing tip](#) explores methods of acute particle characterization to get the most information out of particles shed by medical devices.



New MDT Test Capability: MTS  
Spine Wear Tester

## New MDT Capability: MTS Spine Wear Tester

High-quality, meaningful wear data are critical for successfully pursuing implant approval, production and continued development. For spinal wear testing, MDT utilizes an MTS Bionix Spine Wear Simulator. The MTS Bionix Spine Wear Simulator enables MDT to perform long-term wear, fatigue and durability simulations on lumbar and cervical spinal disc implants.



The system provides application of loads and motions to adhere to the ISO 18192-1&2 and ASTM F2423-11 test standards. The system features user-friendly specimen containment modules, six degrees of freedom and accurate control of fluid concentrations and temperature.

[Learn more about our MTS Bionix Spine Wear Tester.](#)

## Website Additions

We regularly update our [website](#) to serve you better and have recently added the following: [new test instruments](#) for orthopaedic joint wear testing, more pictures of [custom fixture](#)

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designs, search functionality by [type of medical device](#) and by [ASTM standard](#), [ISO standard](#) or [FDA guidance](#) document, and consulting services in [FEA](#), [fatigue failure analysis](#) and [metallurgy](#) through MDT partners.

### **Meet the MDT Team**

Some of the staff you have worked closely with, and some supported your projects from behind the scenes. This month, we get to know better [Calvin Chao](#), MDT's Principal Engineer, who has worked medical device testing miracles at MDT for over 15 years. Read more about Calvin's work at MDT including his advice for the next generation of test engineers.