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Building industry leading test platforms to automate sensing and improve measurements by reducing human errors.

B2V2 BioTribometer

The BioTribometer (B2V2) is a multidirectional, six-station tribological testing platform engineered to replicate the complex motion patterns required for realistic simulation of biomechanical and orthopaedic material wear.

It supports multidirectional sliding profiles, enabling accurate replication of cross-shear effects typically observed in biological joints and implants. The B2V2's modular configuration allows independent loading within the six stations while maintaining synchronized motion across all stations through a common drive system.

Unlike conventional tribometers, the B2V2 operates without a pneumatic supply, requiring only a standard single-phase electrical connection. This simplifies installation, minimizes maintenance, and enables flexible placement in laboratory environments with limited infrastructure.

Motion profiles—including circle, square, line, lemniscate (figure-eight), U, and user-defined trajectories—are fully programmable via the integrated touchscreen interface.

The intuitive control software continuously displays test progress, status, and error indicators, allowing long-duration, unattended operation with confidence. Designed for durability and precision, the BioTribometer's compact form factor and rugged construction ensure repeatable performance over extended testing cycles.

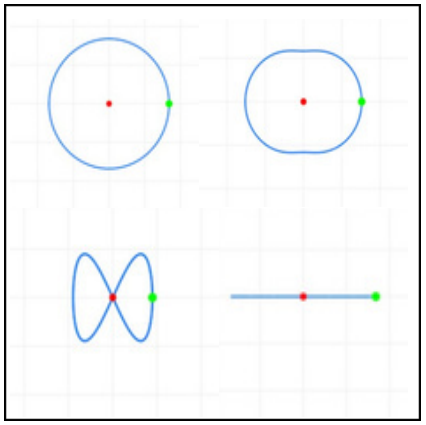
B2V2 complies with load and motion profiles as per ASTM F732 test standard.

Features

- Replicates complex, multidirectional motion profiles (circle, square, figure-eight, U, line, custom)
- Six fully automated test stations for parallel sample testing
- Common motion drive system ensures synchronous movement across stations
- Programmabe load profiles
- Operates entirely on single-phase power
- External temperature controller integration for controlled environment testing
- Touchscreen interface for setup, control, and monitoring
- Real-time visual error alerts and progress indicators
- Designed for long-duration, high-stability testing
- Ultra-compact footprint suitable for space-limited laboratories

B2[V2]

Technical Specifications



Motion profiles circular, rectangular, lemniscate, linear

- Stations: Six stations with common motion drive
- Load: Upto 500 N, programmable
- Motion profiles: Circle, square, line, lemniscate (8), custom
- Motion details: Frequency 0.5 to 2 Hz, amplitude: up to ±10 mm
- Temperature: up to 50 deg C with fluid recirculation
- Fluids: Bovine serum, saline, or synthetic lubricants
- Controls: Integrated touchscreen with onboard software
- Software capabilities: Programmable motion profiles, trajectory editor
- Real-time monitoring, and error diagnostics
- Data logging: Continuous acquisition with timestamped traceability

Options

- External temperature controller
- Friction sensor integration

Six station pin on disc configuration

Specimen Sizes

- Upper pin: 9 mm diameter, 30 mm length
- Lower disc: 30 mm diameter

  other sizes and geometries possible

Power Requirements

- Electrical: 110–230 VAC, 50/60 Hz, 1 Ph

Weight & Dimensions

- Net dimensions: 400×260×1000 mm (15.8×10.2×39.4 in)
- Net weight: 70 kg (155 lb)

Continuing R&D may result in specifications, appearance changes