TORONTECH

TRIBOLOGY TESTING EQUIPMENT & TRIBOMETERS

Tribology Testing Equipment & Tribometers – Friction, Wear & Lubrication Analysis

Torontech offers a comprehensive range of Tribology Testing Equipment & Tribometers designed to evaluate the friction, wear, and lubrication properties of materials under various conditions. Our advanced systems are engineered to support material development, surface coating evaluation, lubricant formulation, and quality control across diverse industries.

Whether you are studying metal-to-metal contact, polymer interactions, or surface treatments, our friction and wear testers deliver the precision and reliability needed for critical tribological evaluations.

Applications of Tribology Testing

Tribology testing is essential for assessing material performance in real-world conditions. Torontech's tribometers are used in:

1. Automotive & Aerospace Engineering – Analyzing brake pads, bearings, engine components, and lubricants
2. Biomedical Devices – Evaluating joint replacements, prosthetic materials, and surgical tools
3. Metallurgy & Surface Coatings – Studying hard coatings, plating, and treated surfaces
4. Polymers & Composites – Assessing wear resistance in plastics and composite parts
5. Energy Sector – Testing materials used in turbines, gears, and drilling equipment
6. Research & Academia – Fundamental tribological studies and material science innovation

Our Range of Tribology Testers

Torontech provides a wide array of friction and wear testing instruments, including:

1. Pin-on-Disk Tribometers – Ideal for standard friction and wear testing under various loads and speeds
2. Reciprocating Wear Testers – For linear sliding motion wear studies (ASTM G133, ISO 19291)
3. Four-Ball Tribometers – Commonly used for lubricants and additives testing (ASTM D4172, ASTM D2783)
4. Ball-on-Disk and Ball-on-Flat Testers – Suitable for coatings, ceramics, and thin films
5. Block-on-Ring & Ring-on-Ring Tribometers – Specialized configurations for rolling contact applications
6. High-Temperature Tribometers – Simulating wear and friction at elevated temperatures
7. Micro & Nano Tribometers – For precision analysis at micro-scale and nano-scale material interactions

Each model is designed to deliver accurate, repeatable results and is compatible with both standardized testing methods and custom research protocols.

Standards & Methods

Torontech’s Tribology Testing Equipment supports a wide variety of international test standards, including:

1. ASTM G99 – Standard Test Method for Wear Testing with a Pin-on-Disk Apparatus
2. ASTM G133 – Reciprocating Sliding Wear Testing
3. ASTM D4172 / D2266 / D2783 – Lubricant and greases testing
4. ISO 7148 / ISO 19291 – Friction and wear tests for plain bearings and tribological coatings
5. DIN 50324 / DIN 50322 – Wear testing of plastics and elastomers

Why Choose Torontech?

1. Extensive range of tribometers for all applications
2. Compliance with ASTM, ISO, DIN and other global standards
3. Advanced software for data acquisition and analysis
4. Modular, customizable designs for specific research needs
5. Global delivery, training, and technical support

Maximize material performance and product reliability with Torontech’s industry-leading Tribology Testing Equipment. Contact us today for expert consultation or to request a detailed catalog.

TORONTECH.com

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