

SCALPEL BLADE SHARPNESS TESTER



Scalpel Blade Sharpness Tester – ToronMed™ SBST04 is designed to accurately measure the sharpness of surgical scalpel blades. By quantifying cutting force across different points of the blade, this system provides objective, repeatable results to ensure that surgical blades meet performance requirements for safe and effective clinical use.

Why Choose Scalpel Blade Sharpness Tester – ToronMed™ SBST04?

The Scalpel Blade Sharpness Tester – ToronMed™ SBST04 provides precision, safety, and reliability for evaluating surgical scalpel blades. With features like automated calibration, advanced safety protections, high-capacity data storage, and optional GMP-compliant software, this tester is an indispensable tool for medical device manufacturers, research laboratories, and inspection institutes. By ensuring consistent blade sharpness, the Scalpel Blade Sharpness Tester helps improve surgical performance and patient safety.

APPLICATIONS

- Basic Applications

- Scalpel blades
- Extended Applications
 - Other shaped medical blades and cutting edges



FEATURES

- Comprehensive Sharpness Testing
Measures cutting force at the front, middle, and rear blade points, with automatic peak force calculation.
- 7-Inch Color Touchscreen
Real-time data display with intelligent analysis and easy operation.
- Flexible Testing
Supports multiple blade types and specifications, including alternative blade designs.
- Automated Calibration & Reporting
Simple calibration process with automated data storage and built-in micro printer.
- Statistical Analysis Function
Outputs maximum, minimum, and average sharpness values for multi-sample testing.
- Large Data Capacity
Stores over 100,000 test records, with automatic power-down memory protection.
- Safety Protections
Includes overload protection, limit switches, automatic return, and over-range shutdown to protect both user and equipment.
- Data Security (Optional)
Four-level password protection with GMP-compliant software supporting user management, authority control, and audit tracking.

THEORY & METHOD

Test Principle

The Scalpel Blade Sharpness Tester secures the scalpel blade in a fixture and drives it through a suture material at a controlled speed. By measuring the cutting force at different points along the blade, the tester determines sharpness and consistency. Automatic calculations provide precise peak force values for objective sharpness evaluation.

TECHNICAL SPECIFICATIONS

Specification	Value
Test Item	Sharpness
Test Range	0-50 N (optional 100 N / 250 N)
Accuracy	0.5% FS
Resolution	0.001 N
Testing Speed	0.05-600 mm/min
Cutting Material	Suture
Dimensions	460 × 400 × 770 mm
Net Weight	33.5 kg
Voltage	AC 220V 50Hz (110V is also available)

Standard Configuration

- Main instrument unit
- 7-inch touchscreen interface
- Micro printer
- Test fixture (sharpness fixture with optional elasticity and fastness fixtures)



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