



SURGICAL SUTURE DIAMETER TESTER (AUTOMATED)

USP 861, YY 1116-2020, YY 0167-2020

Surgical Suture Diameter Tester (Automated) – Model ToronMed™ SSDT01H is an advanced instrument designed to measure the diameter of absorbable and non-absorbable surgical sutures used for suturing and ligating human tissues.

Built in accordance with USP 861 and other internationally recognized standards, this high-precision system offers fully automated testing, data recording, and reporting for unmatched efficiency and accuracy.

With its intelligent automation, the Surgical Suture Diameter Tester (Automated) – Model ToronMed™ SSDT01H allows users to complete the entire test cycle—including automatic suture locking, tension loading, 90° rotation, measurement, and report generation—with just one click, typically in under two minutes.

Standards

The Surgical Suture Diameter Tester (Automated) – Model ToronMed™ SSDT01H is designed in compliance with:

- USP 861 (United States Pharmacopeia) – Defines the standard method for determining the diameter of both absorbable and non-absorbable sutures.
- YY 1116-2020 (Absorbable Surgical Sutures) – Establishes test methods and performance requirements for absorbable sutures.
- YY 0167-2020 (Non-Absorbable Surgical Sutures) – Specifies testing procedures for non-absorbable sutures used in human tissue.

Torontech is a trusted global provider of advanced medical device testing solutions. With the Surgical Suture Diameter Tester (Automated) – Model ToronMed™ SSDT01H, manufacturers and laboratories gain a fully automated, high-precision, and standards-compliant solution that ensures sutures meet the highest levels of safety, accuracy, and performance.

APPLICATIONS

The Surgical Suture Diameter Tester (Automated) – Model ToronMed™ SSdT01H is ideal for:

- Suture manufacturers requiring precise QC and compliance testing.
- Research labs and hospitals developing or validating new suture technologies.
- Independent laboratories providing third-party verification.
- Ensuring compliance with global standards for surgical safety and product quality.

Surgical Suture Diameter Tester

FEATURES

- Compliance
 - Conforms to USP 861 and international suture testing requirements.
 - Supports measurement at multiple points ($\frac{1}{4}$, $\frac{1}{2}$, and $\frac{3}{4}$ of the suture).
 - Multifilament sutures above metric size 2 can be rotated 90° automatically for retesting.
- Stability
 - Equipped with imported Mitutoyo high-precision micrometers, recognized globally for reliability and accuracy.
 - High-speed data cable ensures real-time data collection and transfer.
- Convenience
 - Fully automated test cycle: automatic locking, tensioning, rotation, measurement, reporting, and reset.
 - Rapid test process completes within 60–100 seconds.
 - Celtron high-precision load cell (dual sensor configuration) with 0–58.8N range and $\pm 0.03\%$ accuracy ensures precise force control.
 - Automatic suture rotation system powered by SMC rotary cylinders.
- Intelligent Operation
 - 10.1-inch capacitive touch screen (Win10 system).

- Customizable test parameters with data storage of up to 1,000,000 records.
- Report output via USB Type-C or wireless printing.
- Supports standardized and user-defined measurements for flexibility.
- Safety & Data Security
 - Over-travel protection, overload protection, and power failure memory.
 - Optional GMP-compliant software with four-level user access, audit trails, and authority management.

TECHNICAL SPECIFICATIONS

Specification	Surgical Suture Diameter Tester (Automated) - Model ToronMed™ SSDT01H
Test Item	Suture diameter
Nominal Specification	12-0 to 10 (All Class I, II, III sutures)
Single Filament Suture Length	≥0 mm
Multifilament Suture Length	≥250 mm
Test Range	0-12.7 mm
Resolution	0.0005 mm / 0.001 mm / 0.01 mm (optional)
Test Accuracy	0.002 mm
Presser Foot Diameter	12.7 ± 0.02 mm
Anvil Diameter	50 mm
Flatness (Presser to Anvil)	≤ ±0.005 mm
Parallelism	≤ 1‰
Tensioning Force Range	0-5000 g (Accuracy ±0.1 g)

Specification	Surgical Suture Diameter Tester (Automated) - Model ToronMed™ SSDT01H
Presser Foot Load	210 g $\pm$ 3 g ($\leq$ metric size 0.4 sutures $\leq$ 60 g)
Tension Sensor Range	0-58.8 N
Tension Sensor Accuracy	$\pm$ 0.03% FS
Gas Supply	0.4-0.8 MPa
Voltage	AC 220V 50Hz / 120V 60Hz
Dimensions	1000 $\times$ 350 $\times$ 470 mm
Net Weight	40 kg
Standard Configuration	Instrument, 10.1-inch touch screen, wireless mouse, and test fixture.



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