TORONTECH

SMALL MEDICAL PACKAGING TESTER

Small Medical Packaging Tester | ISO 7864, ISO 7886, ISO 8871-5, USP <381>

Small Medical Packaging Tester – ToronMed™ SMPTM is designed for high-precision evaluation of pharmaceutical and medical packaging materials. It supports multiple test methods, including break force, puncture force, sliding resistance, seal integrity, opening force, tensile strength, heat-seal strength, and peel strength.

Typical applications include testing ampoule bottles, butyl stoppers, aluminum-plastic composite caps, polypropylene caps, films, laminated foils, PVC rigid sheets, pen-type syringes, pre-filled syringes, and medical needles.

This versatile tester ensures compliance with international standards, making it an ideal solution for pharmaceutical manufacturers, quality control labs, and research institutions.

Why Choose Small Medical Packaging Tester – ToronMed™ SMPTM

The Small Medical Packaging Tester – ToronMed™ SMPTM offers comprehensive, standards-compliant testing for pharmaceutical packaging integrity. With its accurate measurement system, versatile fixtures, intelligent software, and GMP-ready data management, it is the trusted solution for pharmaceutical companies, packaging developers, and research laboratories worldwide. This tester ensures that packaging materials maintain sterility, integrity, and performance from production through patient use.

APPLICATIONS

- **Comprehensive Packaging Integrity Testing:** Primary application is the high-precision evaluation of pharmaceutical and medical packaging materials, supporting crucial tests like seal integrity, heat-seal strength, peel strength, and opening force.
- **Hypodermic Component Testing:** Specifically designed for compliance testing of injectable components, including the evaluation of break force, puncture force (for butyl stoppers), sliding resistance of syringe pistons, and connection force (needle-to-hub, needle-to-cap).
- **Wide Material Compatibility:** Suitable for testing a broad range of materials and devices, such as ampoule bottles, pre-filled syringes, aluminum-plastic caps, films, laminated foils, and medical needles.
- **Standards Compliance:** Ensures compliance with international standards, including ISO 7864, ISO 7886, ISO 8871-5, and USP <381>, making it essential for pharmaceutical manufacturers, QC labs, and research institutions globally.

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ToronMed-SMPTM
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Standards Compliance

The ToronMed™ SMPTM Small Medical Packaging Tester is designed in accordance with internationally recognized standards, including:

- ISO 7864 – Sterile hypodermic needles
- ISO 7886 – Sterile hypodermic syringes
- ISO 8871-5 – Elastomeric components for parenterals
- USP <381> – Elastomeric closures for injections

FEATURES

- High-Precision Sensors
  Imported load cells ensure test accuracy within 0.5% FS.
- Variable Speed Control
  Stepless speed adjustment supports a wide range of testing requirements.
- Automatic Calibration & Memory
  Simplifies setup and retains stored data during unexpected power loss.
- Versatile Sample Testing
  Compatible with various packaging and needle specifications through customizable fixtures.
- Large Data Storage
  Capable of storing over 100,000 test records, with optional GMP-compliant software for advanced data traceability.
- Handheld Control Box
  Provides added convenience during sample setup and operation.
- Seamless Connectivity
  RS232 interface for PC connection and easy data transfer.

THEORY & METHOD

Test Principle

Samples are clamped between dual chucks and subjected to controlled movement. Using specialized fixtures, the tester records force and displacement during piercing, opening, or tensile tests. Results are automatically calculated and displayed, providing precise data for analysis.

TECHNICAL SPECIFICATIONS

Specification	Value
Test Range	0–500 N
Resolution	0.01 N
Accuracy	0.5% FS
Test Speed	0.05–600 mm/min
Stroke	300 mm
Dimensions	460 × 400 × 770 mm
Net Weight	33.5 kg
Voltage	AC 220V 50Hz (110V is also available)

Standard Configuration

- Main instrument unit
- Touchscreen interface
- Puncture/tensile test fixture
- Professional software
- Communication cable

Optional Accessories: Load cells of different capacities and specialized grips for:

- Ampoule fracture strength testing
- Connection force testing (needle to hub, needle to cap)
- Sliding resistance of syringe pistons
- Other pharmaceutical packaging integrity tests

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