

MEDICAL PACKAGING TESTER



Medical Packaging Tester | ISO 7864, ISO 7886, ISO 9626, ISO 8537, ISO 23908

Medical Packaging Tester – Model ToronMed™ MPT01H is an advanced testing system designed to evaluate the mechanical performance and integrity of pharmaceutical packaging materials. It is capable of testing break force, puncture force, sliding force, body tightness, opening force, tensile strength, heat-seal strength, peel strength, and other key parameters across a wide range of medical packaging formats.

This versatile tester supports applications for ampoule bottles, butyl plugs, aluminum-plastic composite caps, polypropylene caps, pharmaceutical foils, PVC rigid tablets, pen-type syringes, pre-filled syringes, needles, and composite films, ensuring packaging meets global regulatory requirements and performance standards.

The Medical Packaging Tester – Model ToronMed™ MPT01H is a comprehensive, high-precision solution for testing pharmaceutical and medical packaging materials. Trusted by manufacturers, laboratories, and regulatory bodies, it ensures that medical packaging meets the highest international standards of quality and patient safety.

APPLICATIONS

The Medical Packaging Tester – Model ToronMed™ MPT01H is suitable for:

- Break and puncture testing of ampoule bottles and aluminum-plastic caps.
- Opening, puncture, and holding force evaluation of polypropylene composite caps.
- Tensile, peel, and heat-seal strength analysis of PVC films and medical foils.
- Puncture, sliding resistance, and seal performance testing of hypodermic syringes, pre-filled syringes, and needles.

Note: Some applications may require optional grips or accessories.



Standards

The Medical Packaging Tester – Model ToronMed™ MPT01H is designed in compliance with major international standards for medical packaging materials, including:

- ISO 7864 – Sterile hypodermic needles – requirements and test methods.
- ISO 7886 – Sterile hypodermic syringes for single use – performance and testing requirements.
- ISO 9626 – Stainless steel needle tubing for the manufacture of medical devices.
- ISO 8537 – Sterile single-use syringes with a re-use prevention feature.
- ISO 23908 – Sharps injury protection – test methods and requirements for needle-based systems.

By adhering to these standards, the ToronMed™ MPT01H enables manufacturers and laboratories to ensure compliance with global regulatory benchmarks for packaging safety, performance, and reliability.

FEATURES

- Dual test modes for tensile and compression.
- Ultra-high accuracy (0.1% FS) ensures repeatability and precision.
- Advanced servo drive system with variable speed up to 3000 mm/min.
- Crossbeam with three-guide design and self-lubricating graphite sleeves for smooth linear motion.
- Multiple grips and load cells available to support more than 10,000 material test applications.
- Displacement accuracy up to 0.1 mm with advanced displacement control.
- Handheld control box for auxiliary operation and improved user convenience.
- Built-in safety protections: over-travel, overload, auto reset, power-down memory, and UL-certified Schneider emergency stop.
- Professional software with traceable data, audit trail, multi-level authority management, and GMP compliance (optional).

- Data storage and backup management with comprehensive reporting and analysis functions.
- PC connectivity via RS232 interface for seamless integration.

THEORY & METHOD

Test Principle

Samples are clamped between two grips, and tensile, compression, puncture, or peel tests are conducted using specialized fixtures. The instrument collects force and displacement data through its force control system, calculating corresponding performance metrics to evaluate packaging material integrity.

Key Testing Capabilities

- Break Force & Opening Force – For ampoule bottles and composite caps.
- Puncture Resistance & Seal Strength – For hypodermic syringes, pre-filled syringes, and needles.
- Tensile & Peel Strength – For films, foils, and PVC rigid slices.
- Sliding Resistance & Tightness Tests – Ensuring consistent functionality in packaging under stress conditions.
- Heat-Seal Strength – For pharmaceutical blister packs and foil laminates.

TECHNICAL SPECIFICATIONS

Item	Medical Packaging Tester - Model ToronMed™ MPT01H
Load Cell Capacity	30N / 50N / 100N / 200N / 500N / 1000N
Testing Accuracy	0.1% FS

Item	Medical Packaging Tester - Model ToronMed™ MPT01H
Load Cells	1 (interchangeable)
Drive System	Imported servo drive system
Crossbeam Speed	0.05-1000 mm/min
Speed Accuracy	±1%
Maximum Stroke	600 mm
Specimen Width	30 mm (standard), 50 mm (optional)
Number of Specimens	1
Clamping	Manual (standard) / Pneumatic (optional)
Voltage	AC 220V 50Hz / 120V 60Hz
Dimensions	480 × 480 × 1100 mm
Net Weight	50 kg
Standard Configuration	Instrument, universal grips, professional software, communication cable.
Optional Accessories	Load cells and special grips (ampoule fracture strength, needle hub connection force, piston sliding resistance, etc.).



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