MEGA 1500 Auto Tensile Tester is professionally designed for the determination of tensile strength, peel strength, tear strength, heat seal strength and adhesiveness of plastic films, composite films, flexible packaging materials, adhesives, adhesive tapes, pressure sensitive tapes, medical patches, protective films, release paper, rubber and paper, etc.

Professional Technology

- Double-column ball screw driving mechanism ensures high precision and steady working of the instrument
- Multiple testing modes are available including tensile strength, deformation, peeling and tearing, etc. which can meet the testing demands of the customers
- Stress at defined elongation, elastic modulus and stress and strain etc. can be analyzed
- 1200mm extra-long stroke satisfies the test needs of various materials with extreme deformation rate
- 6 working stations and pneumatic specimen clamping facilitate to test multiple specimens simultaneously
- Load cells with different test ranges and stepless speed change from 1 to 500mm/min can meet the requirements for various testing conditions
- The embedded computer controller system, with membrane switch is convenient for instrument operation
- Multi-level over-travel protection, overload protect, automatic position reset and intelligent error alerts for safe test operation
- Embedded computer controlled system effectively guarantees the system security and the reliability of data management as well as test operation
- The instrument can be operated with one monitor, one mouse and one keyboard, not requiring a computer
- The system is equipped with four USB ports and two net connection interfaces, which is convenient to data expansion
- Professional operating software supports superposition analysis of test curves of group specimens and statistical analysis of maximum, minimum, average and standard deviation of test results

Test Principle

The pre-conditioned specimen is mounted between two grips, which move in relative direction during the test. The changes of force and displacement are separately recorded by the load cell fixed on the moveable sample grips and embedded displacement transducer. The tensile strength, tear strength and elongation rate can be obtained by further calculation.

Test Standard

This test instrument conforms to the following standards:

ISO 37, ASTM E4, ASTM D882, ASTM D1938, ASTM D3330, ASTM F88, ASTM F904, GB 8808, GB/T 1040.1-2006, GB/T 1040.2-2006, GB/T 1040.3-2006, GB/T 1040.4-2006, GB/T 1040.5-2008, GB/T 4850-2002, GB/T 12914-2008, GB/T 17200, GB/T 16578.1-2008, GB/T 7122, GB/T 2790, GB/T 2791, GB/T 2792, GB/T 17590, JIS P8113, QB/T 2358, QB/T 1130

Applications

This instrument is equipped with more than 100 grips for tests of more than 1000 materials. And customization is also available for special material tests. Examples of instrument applications:

Basic Application	Extended Application (Additional Accessories Required)			
Tensile Test	Opening Resistance Test of Combined Covers	Tear Test of ZD - Type Caps	Opening Resistance Test of Oral Liquid Caps	90 Degree Pullout Test of Infusion Bag Caps
Test of Tensile Strength and Elongation Rate	Tear Test of Adhesive Binding Books	Tear Test of Adhesives	23 Degree Pullout Test of Bottle Caps	Pullout Test of Closures of Infusion Bags
Test of Tensile Strength at Break	90 Degree Peel Test	Adhesive Strength Test (hard)	90 Degree Peel Test of Water-soluble Plasters	Opening Resistance Test of Jelly Cups and Yogurt Cups
Tear Resistance Test	Adhesive Strength Test (soft)	Pullout Test of Tooth Brush Hair	Peel Test of Flexible Tube Caps	Removal Force of Pipes and Pipe Joints
Heat Seal Strength Test	Pullout Test of Cosmetic Brush Hair	Pullout Test of Rubber Closures	Tensile Strength of Ropes at Break	Separating Force of Protection Films
90 Degree Peel Test	Peel Test of Cup Films	Tear Test of Heatseal Films	45 Degree Peel Test of Bottle Membranes	Tensile Strength of Zip-lock Bag Mouth
180 Degree Peel Test	Peel Test of Release Paper	135 Degree Peel Test of Plugs	Unwrapping Force of Adhesive Tapes	Tear Test Using Trouser Method
	20 Degree Peel Test	Peeling Grips of Floating Rollers	Eccentric Grips	Wide Sample Grips
	Japanese Sample Grips	British Sample Grips		

Technical Specifications

Specifications	MEGA1500
Load Cell Capacity	500N（Standard）50N, 100N, 250N, 1000N（Optional）
Accuracy	1% FS
Test Speed	1-500mm/min (Stepless Speed Change)
Number of Stations	6
Number of Specimens	1~6
Specimen Width	25mm（Standard Sample Grip）

Clamping Way	Pneumatic Specimen Clamp
Stroke	1200mm
Gas Supply Pressure	0.6MPa~0.7MPa（Outside of Supply Scope）
Port Size	Φ6mm PU Tubing
Instrument Dimension	850 mm (L) × 700 mm (W) × 2030 mm (H)
Power Supply	220VAC 50Hz / 120VAC 60Hz
Net Weight	168 kg

Configurations

Standard Configurations	Instrument, Professional Software, Pedal Switch, LCD Monitor, Keyboard, Mouse, Pneumatic Clamping System, Wireless Data Interface, Wireless Data Module, Micro-printer, Standard Sample Grip (25mm)
Optional Parts	Sample Cutter Set[Note], High Gain Antenna, Installing Support

Note:

Clamp the whole sample into the sample grips of the 6 stations, then 6 specimens can be made by using the sample cutter set at a time. The specimen width is 15mm.

Remarks:

1. The gas supply port of the instrument is Φ6 mm PU tubing;
2. Customers will need to prepare gas supply.

Please Note: Labthink is always dedicated to the innovation and improvement of product performance and function. Therefore, technical specifications are subject to change without further notice. Please visit our website at www.labthink.com for the latest updates. Labthink reserves the rights of final interpretation and revision.