

**i-Strentek 1510 Universal Testing Machine** is professionally designed for the determination of mechanical properties including tensile strength, peel strength, tear strength, heat seal strength, adhesiveness and bending performance of plastic films, composite films, flexible packaging materials, adhesive tapes, rubber and paper, etc. It can be also used to measure the compression and bending performance of corrugated box, honeycomb panel box, flexible packaging bag, plastic container (for edible oil or mineral water), paper bucket, paper can, integrated buoyancy can (IBC) and hollow container, etc.



### Product Features <sup>Note2</sup>

- Multiple testing modes are available including tensile strength, deformation, peeling, tearing and compression resistance, etc. which can meet the testing demands of the customers
- Statistical analysis on stress at definite elongation, elastic modulus and strain and stress are available
- Double-column ball screw driving mechanism ensures high precision and steady working of the instrument
- Compact and integrated design of the instrument can meet the requirements for various operating environments
- Stepless speed change <sup>Note3</sup> from 1 to 500mm/min can meet the requirements for various testing conditions
- Multi-level over-travel protection, overload protect, automatic position reset and intelligent error alerts for safe test operation
- The embedded computer controller system, with membrane switch is convenient for instrument operation
- Embedded computer controlled system effectively guarantees the system security and the reliability of data management as well as test operation
- The system is equipped with four USB ports and two net connection interfaces, which is convenient to data transmission
- 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
- It supports Labthink exclusive DataShield™ <sup>Note4</sup> (Optional) , which provides the users with safe and reliable management of test data and test reports.

### Test Principle

The specimen is clamped in the sample grips between the crossbeam and instrument base. The crossbeam and instrument base will move relatively. The force value and displacement will be collected during this process through the load cell in crossbeam and embedded displacement sensor. Then the mechanical properties of the specimen can be calculated.

### Test Standards <sup>Note2</sup>

This test instrument conforms to the following standards:

ISO 37, ASTM E4, ASTM D882, ASTM D 1938, ASTM D333, 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 14232.1-2004, GB 15811-2001, GB/T 1962.1-2001, GB 2637-1995, GB 15810-2001, QB/T 2358, QB/T 1130, JIS P8113, YY0613-2007, YBB00042005, YBB00112004

## Applications<sup>Note2</sup>

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 of Adhesive Tape	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 Milk 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
Compression Resistance Test	20 Degree Peel Test	Peeling Grips of Floating Rollers	Eccentric Grips	Wide Sample Grips
	Japanese Sample Grips	British Sample Grips	Compression Resistance Tests of Containers	Compression Resistance Tests of Sponge

## Technical Specifications<sup>Note1</sup>

Specifications	i-Strentek 1510
Test Force Range	500N (Standard) 50N, 100N, 250N, 1000N, 2000N, 5000N, 10000N (Optional)
Accuracy	1% FS
Test Speed	1 ~ 500mm/min (Stepless Speed Change) <sup>Note3</sup>
Number of Specimens	1
Clamping Way	Pneumatic Specimen Clamp
Stroke	800mm

<b>Gas Supply Pressure</b>	0.5MPa~0.7MPa (Outside of Supply Scope)
<b>Port Size</b>	Φ 6mm PU Tubing
<b>Instrument Dimension</b>	850 mm (L) × 700 mm (W) × 1630 mm (H)
<b>Power Supply</b>	220VAC 50Hz / 120VAC 60Hz
<b>Net Weight</b>	150 kg

### Configurations <sup>Note2</sup>

<b>Standard Configurations</b>	Instrument, Professional Software, Pedal Switch, LCD Monitor, Keyboard, Mouse, Pneumatic Film Specimen Clamp
<b>Optional Parts</b>	Wedge-shape Sample Clamp (Manual), Sample Clamp for Compression Resistance Test, Lever-type Specimen Clamp (Pneumatic), DataShield™

### Remarks:

**Note 1:** The parameters in the table are measured by professional operator in Labthink laboratory according to relative requirements for laboratory standard conditions.

**Note 2:** The described product features, test standards and configurations should be in line with Technical Specifications.

**Note 3:** The test speed should be integer in the range of 1 ~ 500.

**Note 4:** DataShield™ provides safe and reliable data application support. Multiple Labthink instruments can share one single DataShield™ system which can be purchase as required.

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