

TST-02H Auto Tensile Tester

Brief Introduction

TST-02H Auto Tensile Tester is applicable to determination of tensile properties, peel strength(90°, 180°), deformation, tearing strength, heat seal strength, puncture resistance, opening force, low-speed unwrapping force, pullout force and other properties of plastic films, composite materials, adhesives, adhesive tapes, medical patches, protective films, pressure sensitive paper, combination caps, metal foils and back panel materials, etc.



Technical Features

- ◆ 1000mm extra-long stroke for various test items with extreme elongation rate
- ◆ The crossbeam is composed of three guide bars and graphite self-lubricating sleeve, which can ensure the linear movement of the crossbeam.
- ◆ Two-way test mode for tensile and compression
- ◆ 0.1% of full scale effectively ensures accuracy and repeatability of test results
- ◆ Equipped with dual load cells, compatible with multiple force test ranges
- ◆ Equipped with advanced displacement control system, displacement accuracy can reach 0.1mm
- ◆ With Panasonic's advanced servo drive system, which can achieve infinitely variable speed and wider test speed range to meet the user's needs for different test conditions.

- ◆ 11.6 inch PAD with intelligent data processing functions, providing users with a comfortable and smooth operating experience
- ◆ Speeds up to 3000mm/min for high-speed testing requirements
- ◆ Equipped with a handheld control box for auxiliary operation, which makes the test more convenient
- ◆ Wide range of load cells for a variety of force testing requirements
- ◆ Equipped with a variety of grips for choose, which can meet the test requirements of more than 10,000 materials
- ◆ Intelligent designs of over-travel protection, overload protection, automatic position reset and power failure memory for safe test operation
- ◆ Equipped with UL-certified imported Schneider emergency stop button to maximize the safety of man and machine during the test

Professional software

- ◆ With convenient user-defined test functions and complete data analysis and reporting functions
- ◆ Built-in test file standard library, conforms to various international test methods
- ◆ Provide historical data backup management function, which can conduct diversified analysis of historical test data
- ◆ Equipped with standard RS232 interface, which is convenient to PC connection and data transmission
- ◆ Unique features such as constant elongation stress, elastic modulus, yield strength, bending test, timing constant force positioning shift test, interval selection point, etc.
- ◆ Real-time display of force-displacement, force-time, displacement-time, stress-strain and other curves, automatic calculation of maximum force, yield force, average force, maximum deformation, yield point, elastic modulus and other parameters, built-in powerful unit conversion program, Users can customize various domestic and foreign units, which is conducive to scientific research
- ◆ The software data is traceable, which can realize functions such as multi-level authority management, audit trail, electronic signature, etc., which meets the requirements of GMP (optional)
- ◆ Free software upgrade service for life

Test Principle

The specimen clamped between two chuck and do relative motion. Conduct piercing or opening test through special clamp head. Collect the strength and displacement changes in the progress of test by force test and control system to calculate the corresponding force value data.

Applications

Basic	Extended Application**
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Application*				
Tensile Strength & Deformation Rate	Puncture Resistance Test of Artificial Skin	Puncture Test of Films	Puncture Resistance of Infusion Bag Closures	Puncture/Pullout Test of Flexible Rubber Closures
Tensile Stress at Break	Opening Resistance Test of Combined Covers	Tear Test of ZD - Type Caps	Tearing Resistance Test of Oral Liquid Caps	Puncture/Pullout Test of Oral Liquid Caps
Heat Seal Strength	90 Degree Pullout Force Test of Infusion Bag Closure	Pullout Test of Infusion Bag Closure	23 Degree Pullout Test of Bottle Caps	Puncture/Pullout Test of Flexible Rubber Closures
Tearing Strength	90 Degree Peel Test of Adhesive Tapes	Tear Resistance Test of Adhesive Binding Books	90 Degree Peel Test of Water-soluble Plasters	Tearing Resistance Test of Adhesives
Shearing Strength	Adhesive Strength Test (soft)	Adhesive Strength Test (Hard)	Peel Test of Flexible Tube Caps	Removal Force of Pipes and Pipe Joints
180 degree Peel Test	Pullout Test of Cosmetic Brush Hair	Pullout Test of Tooth Brush Hair	Tensile Strength of Ropes at Break	Opening Force Test of Jelly Cups and Yogurt Cups
90 Degree Peel Test	Peel Test of Cup Films	Pullout Test of Rubber Closure	45 Degree Peel Test of Bottle Membranes	Tensile Strength of Sealing Bags
	Peel Test of Magnetic Cards	90 Degree Peel Test of Magnetic Cards	Tearing Resistance of Heat-sealable Films	Separating Force Test of Protective Films
	Separating Force of Release Paper	Tear Test Using Trouser	Unwrapping Force of Adhesive	Compression Resistance Test

		Method	Tapes	of Plastic Bottles
	20 Degree Peel Test	135 Degree Peel Test of Plugs	Peeling Grips of Floating Rollers	Eccentric Grips
	Wide Sample Grips	Japanese Sample Grips	British Sample Grips	

*Note: *Additional accessories or customized sample grips may need to be purchased separately to complete the tests that cannot be completed with standard sample grips.*

*** Customized grips are needed for extended applications*

Technical Specifications

Item	TST-02 H
Load Cell Capacity	30N/50N/100N/200N/500N/1000N
Testing Accuracy	0.1% FS
No. of Load Cell	2
Drive System	Imported Panasonic servo drive system
Speed of Crossbeam	0.05~1000 mm/min (Maximum 3000mm/min customizable)
Accuracy of Speed	±1%
Maximum Stroke	1000mm
Displacement Accuracy	±1%
Number of Specimens	1

Specimen Width	30mm (standard), 50mm (optional)
Clamping Way	pneumatic (standard) , Manual (optional)
Power Supply	AC 220V 50Hz/120V 60Hz
Instrument Dimension	480mm(L)×480mm(W)×1500mm(H)
Net Weight	90kg

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

Configuration

Standard Configuration	Instrument, Universal Grips, Professional Software, Communication Cable
Optional Parts	Test Plate (50×125,40×180. Customization available for other specs), Sample Cutter (10#、15#、20#、25#、25.4#. Customization available for other specs), Non-standard Sample Grips (customization available)

Technical specifications are subject to change without further notice. Please visit our website at www.horizontester.com for latest information.