

## Advanced

# Textile Testing Technologies











**Tensile Testers** 

**Wrap Reel Tester** 

**Elmendorf Tearing Strength Testers** 

**Burst Strength Testers** 

**Dyeing Rubbing Tester** 

**Crock Meters** 

**Abrasion Testers** 

**Water Penetration Testers** 

**Sample Cutters** 

Slide Fasteners Reciprocating Tester

**Launder Tester** 

**Scorch Tester** 

**Perspiration Tester - Perspirometer** 

**Spray Tester** 

**Button Impact Resistance Tester** 

**Bally Waterproofness Tester** 

**Bally Leather Flexing Tester** 

Frazier Differential Pressure Air Permeability Tester

**Motorized Yarn Twist Counter** 

Yarn Inspector

**Stiffness Tester** 

## **About Qualitest**

QUALITEST, together with the WorldofTest.com network, is a global supplier of testing technologies that help customers improve their design, development and manufacturing processes. Our mission is to help our customers design, develop and produce their products faster, with higher quality and at a lower cost. A leader in offering the widest range of precision metal testing technologies on the market, Qualitest leverages extensive industry experience to provide products that determine the mechanical properties of metals including steel, aluminum, alloys, iron, and much more. These solutions include portable and low cost instruments as well as bench-top and sophisticated systems to meet your highest demands.

With rapidly growing presence in North America and worldwide, Qualitest maintains offices in USA, Canada, UAE, Asia and Mexico with a wide network of sales and service partners. This global presence ensures that Qualitest customers have fast and efficient access to Qualitest service, support and consulting services to realize optimal return on their testing solution investments.

Qualitiest offers direct after sales service/calibration support or through our authorized and nationwide A2LA accredited and ISO 17025 certified service centers.

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## **Textile**

Any filament, fibre, or yarn that can be made into fabric or cloth is known as a textile—this category includes threads, cords, ropes, and fabrics made by weaving, knitting, bonding, felting, or tufting. Some definitions of the term 'textile' also include those products obtained by papermaking, which have many of the properties associated with conventional fabrics.

The textile industry increasingly employs research and development in the area of quality control. Textile fabrics are judged by many criteria including design, colour, flexibility, strength, and rigid specifications of width, weight per unit area, weave and yarn structure, thickness, and porosity.

### **General Applications**

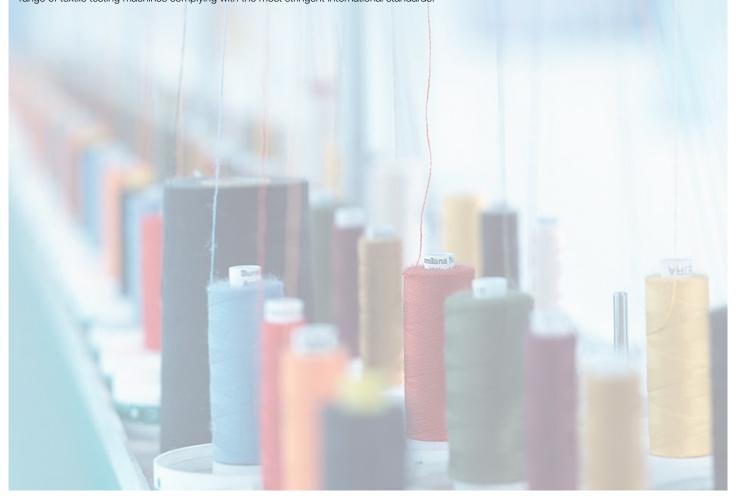
Textile products play a vital role in meeting our basic needs. We often consider the textile industry as "the maker of the clothes we wear," but the technological advances of textiles in various sectors go far beyond the clothing industry.

In the food industry, coffee filters and tea bags are made of an innovative nonwoven textile. In the construction industry, textiles are used in building materials for our homes—including roofing materials, wire coverings, wall coverings, blinds, air ducts, and window screens—to insulate houses from heat and cold. The transportation industry relies on textiles to line the beds of the roads before they are paved, and tires get 75% of their strength from textiles. In the healthcare industry, textiles are used extensively: sutures for wounds, casts for broken bones, surgical masks, bandages, and gloves are all made from textiles.

As one of the most widely-used materials across many industries, the quality of textiles must be accurately tested. There are a number of points in the production cycle where testing may be carried out—from raw materials to product development and production—which improves products and prevents sub-standard merchandise from progressing further in the cycle.

Qualitest's Advanced Testing Technologies are the most reliable and cost-effective solutions for Textile Testing.

Together with our network of partners, Qualitest offers a complete selection of testing machines and systems for textiles. We supply an extensive series of competitive solutions such as Abrasion testing machines, which are customizable and equipped with advanced software, as well as a comprehensive range of textile testing machines complying with the most stringent international standards.



#### **Tensile Testers**

#### www.WorldofTest.com/tensiletester.htm

Qualitest offers the most competitive line of Tensile Tester range in the industry. Our comprehensive range of Tensile Tester products, along with our extensive range of grips/fixtures, load cells, extensometers, offer the best price/quality ratio models on the market. The Qualitest Tensile Testers range is designed for quick and reliable tensile tests on textiles products.

Qualitest series of Tensile Testers is loaded with technical features, ergonomic design and is produced with the highest quality as a benchmark. These instruments are suitable to be used in: Production lines, where the operator has to be fast and efficient, and accurately control the test, Testing lab environments, where using the advanced software, the users can analyze the test data, have full control on processing, filing, and test management. The Tensile Testers series provides very high value to its users, as it is designed with advanced technology for easy operation and data retrieval and manipulation – at a very reasonable price, very efficient and comprehensive support with Qualitest's professional after sales service team.

Tensile Tester Series	
Models	Capacity
ESM303	1.5 kN / 300 lbf / 150 kgf
QM 2	2.0 kN / 450 lbf / 200 kgf
Q2.5	2.5 kN / 550 lbf / 250 kgf

#### **ESM 303 Tensile Tester**

#### www.WorldofTest.com/esm303.htm

The ESM303 is a highly configurable motorized test stand for tension applications up to 300 lbF [1.5 kN]. The ESM 303 is engineered on a unique modular platform, allowing companies to customize the configuration.

Integrated travel indication, overload protection, and a host of programmable parameters makes the ESM303 quite sophisticated, while its intuitive menu structure allows for quick, simple setup and operation.

With a rugged and modular design, the ESM303 is a compelling solution for applications in textile industry.

#### Features

- Selectable speed setting
- Upper and lower travel limit switches
- Adjustable, removal controller with intuitive menu navigation
- Password protection of test parameters
- Stepper motor-driven, producing smooth and quiet operation with no speed variation under load
- USB output of force vs. time or force vs. travel
- Compact footprint, suitable for crowded workbenches
- Ergonomic design, with smart, clean cable management
- Integrated electronics assembly, easily removed and transported



#### QM-2 Tensile Tester

#### www.WorldofTest.com/qm-utm.htm#qm\_1

#### **Features**

- Single Column, Stand Alone System with 2kN (450lbf) Maximum Capacity
- Ergonomic Design with many Advanced Features
- 2 Years Warranty
- Flexible and Modular Design for Easy Expansion in the Future
- Excellent Price/Quality Ratio
- Precision reducers, ball screws which significantly reduce the noise and transmission losses while increasing the transmission efficiency.
- The seal plate mining anode hardening protects the ball screw and increase service life and precision of the instrument.
- Load cell has memory lock function which memorizes various parameters.
- Plug and play load cell.
- When using the external I/O signal contact various functions can be expanded.
- Jog control and very easy for operation of machine
- Many relevant tests can be performed with optional grips and extensometer of fixtures.

#### Q 2.5 Tensile Tester

ASTM E4.EN-ISO 7500/1

#### www.WorldofTest.com/tensiletester.htm

The 2.5 kN Q2.5 is the Tensile Tester with the state-of-the-art design, built to the highest quality levels and with many advanced technical features. Programming tests and monitoring results can be controlled through our powerful and intelligent Graph work 5.0 test software, which allow complete and accurate data management in accordance with North American and International Standards. This instrument is suitable for use both in production lines where the operator has to be fast and efficient and can accurately control the test with the optional remote control unit, and also laboratory environments where the advanced software lets users analyse the test data. Graph work allows full control of processing, filing, managing, and transmitting data to the company network, database, and performs many other functions. This Q2.5 frame has a flexible and modular construction. This user-friendly instrument can be fitted with additional load cells with lower capacities, providing the highest resolution and accuracy for micro-loads.

#### **Features**

- Single-column rigid system with 2.5 kN maximum capacity
- Stylish design and advanced features
- Two-Year Warranty
- Flexible and modular design for easy future expansion
- Key technical advantages include extremely high resolution of load and stroke readings for the high performance and most accurate results
- Manufactured by an ISO 9001 certified company
- Excellent price-to-quality ratio





#### **Wrap Reel Tester**

#### www.WorldofTest.com/manualwrapreel.htm

Wrap Reel Tester is used for determining the count of yarn by making a lea of standard circumference and number of turns and finding its weight, from which the Tex. or the count of the yarn can be determined. The lea is usually made on a wrap reel, which may be either hand or motor operated. These leas may also be used for the determination of the strength of yarn (lea strength), or for conducting certain chemical or color fastness tests. The leas may have a circumference of one meter or 1.5 yards.



#### **Elmendorf Tearing Strength Tester**

#### JIS-P8116.TAPPI-T414

#### www.WorldofTest.com/elmendorf.htm

The ELM Series Elmendorf Tearing Testers are accurate, low-cost and high quality falling pendulum tear testing Instruments with analog display for determination of the average force required to propagate a single-rip tongue-type tear starting from a cut in paper, cardboard, plastics, non-woven and woven fabrics, with proper configuration. The model ELM-6400, meeting ASTM standards is suitable for most fabrics including woven, layered blankets, napped pile, blanket, and air bag fabrics, and provided the fabric does not tear in the direction crosswise to the direction of the force application during the test. The fabrics may be untreated, heavily sized, coated, resin-treated, or otherwise treated. This test method covers the measurement of the average force required to propagate a single-rip tear starting from a cut in a non-woven fabric using a falling-pendulum (Elmendorf) apparatus. The model ELM-100, meets TAPPI T414 standard, for Internal Tearing Resistance of Paper (Elmendorf-Type Method) this method measures the force perpendicular to the plane of the paper required to tear multiple plies through a specified distance after the tear has started using an Elmendorf-type tearing tester. The measured results are used to calculate the approximate tearing resistance of a single sheet.



#### **Digital Elmendorf Tearing Strength Tester**

ASTM D5734, ASTM D1922, ASTM D1424, ASTM D689, TAPPI T414, ISO 4674-2-040, ISO 6383-1-1983, ISO 6383-2-1983, ISO 1974,

#### www.WorldofTest.com/elmendorf.htm

Digital Elmendorf Tearing Strength Tester is designed for the tearing test of films, sheets, flexible PVC, PVDC, waterproof films, woven materials, polypropylene, polyester, paper, cardboard, textile and non-woven and etc. Lift the pendulum up to a certain height to give it an initial potential energy. The pendulum tears the specimen while swinging down. Computer calculates the decreased energy caused by tearing to obtain the required force for tearing. The instrument is controlled by computer with automatic and electronic measurement which is convenient for the operation. Pneumatic specimen clamping and automatic release of pendulum could avoid the system error effectively. Computer assisted horizontal adjustment system could maintain the instrument optimum status. It is equipped with pendulums of multiple capacities. The professional software supports multi-unit data output. It is equipped with RS232 port which is convenient to the data transmission and external connection. It supports data sharing system for uniform and systematic data management.



#### **Burst Strength Testers**

## ASTM-D2210,ISO-2759,JIS-L1018,JIS-P8112,TAPPI-T403 www.WorldofTest.com/burst.htm

This machine is used for determining the burst strength of materials such as leather, textiles, paper, etc. This machine is also used for products which are packaged by corrugated paper such as electronic instruments, electric were, hardwares, bike, valise, food, shoe, furniture etc. to test the bursting-resistance strength of paper box; This Bursting strength tester is adopted with signal output of pressure. While specimen is breaking, the max. breaking value will be kept with the alarm buzzer & alert light automatically. Its accuracy has promoted 20times more than the traditional gauge.



#### **Digital Burst Strength Testers**

ASTM-D2210, JIS-L1018, JIS-P8112, TAPPI-T403

#### www.WorldofTest.com/digitalburst.htm

This Digital Bursting Strength Tester is used to test the bursting strength of corrugated papers, synthetic leather and cloth. It can detect and grip the specimen automatically when placing it onto the compression plate. By pressing the "Test" button, it will automatically test, calculate, save and print.

#### **Automatic Burst Strength Testers**

ASTM-D2210, ISO-2759, JIS-L1018, JIS-P8112, TAPPI-T403, JIS-L1004

This type of Digital Bursting Strength tester is able to test bursting resistance of the specimen automatically. As lone as placing the specimen, it will automatically perform detection, testing return, calculation, and saving / printing out test data.

#### **Dyeing Rubbing Tester**

JIS-K6404,JIS-L0849,JIS-L0862,JIS-P8136

#### www.WorldofTest.com/dyeingrubbingtester.htm

This state-of-the-art dyeing rubbing tester allows you to judge the color firmness of dyeing or printed materials. The abrasive hammer is to be wrapped with either a dry or wet white cotton cloth, thus allowing to you to abrade the colored sample with certain loading and times. The sample is then compared with a gray-scale to judge the color firmness. For colored fabric or leather and similar materials, test the dyeing-color firmness against abrasion. Use the standard white cotton cloth (dry or wet) to wrap the abrasion hammer and attach with a fix load weight. Set abrasion to a specific number of times smoothly to the colored specimen. Then take out the white cotton cloth to compare with the standard gray-scale and evaluate the level of color firmness or dying or printing of the material.

#### **Motorized Crock Meter**

ASTM-D2054, ISO-105, JIS-L0849, AATCC-8, JIS-0862

#### www.WorldofTest.com/crockmeter.htm

Motorized Crock Meter is used to determine the discolored extent for the dyed textile or dyed leather by abrasion method. At first, coat abrasive hammer with dry or wet white cotton cloth then drive it to repeatedly abrade the specimen clamped on testing table for ten times within 10 seconds to examine grade of color-dyeing firmness.

#### **Manual Crock Meter**

ASTM D2054, AATCC-8, ISO-105, JIS-L0849, JIS-L0862

#### www.WorldofTest.com/crockmeter.htm#crockmeter 1

Manual Crock Meter is designed to test the discoloration extent of dry textile and leather after abrasion. The rubbing hammer of this crock meter is wrapped with dry or wet white cotton cloth, and then rubbed on the specimen clamped to the testing table ten times for 10 seconds. The cloth is then removed to evaluate the discolor level in comparison with a gray-scale.

#### **Rotary Abrasion Tester**

ASTM C501 / C1353 / D4157 / D1044 / D3389 / D3451 / D3730 / D3884 / D4060 / D4685 / D4712 / D5144 / D5146 / D5324/ D6037 / D7255/ F362/ F510/ F1478/ G195/ F1978, TAPPI T476

#### www.WorldofTest.com/rotaryabrasion.htm

The Rotary Platform Abrasion Testing method was introduced in the 1930's and has been a popular method for evaluating abrasion and wear resistance. Qualitest's Rotary Abrasion Tester is a cost-effective, easy to use and high quality instrument, used to cover a wide spectrum of materials (including plastics, coatings, laminates, leather, paper, ceramics, carpeting, safety glazing, etc.) This machine is designed for determining the resistance of textile products to abrasion. The specimen fixed to the cone rubs against the sand paper at a given load. This rub is conducted along the generatrix of the cone continuously and hence the friction effect is produced in the tangential direction.

#### **Shoe Lace Abrasion Tester**

DIN-4843

#### www.WorldofTest.com/shoelaceabrasiontester.htm

This machine is designed for determining the resistance of all shoelaces to abrasion. This tester simulates the lace under the reciprocal abrasion at a specified tension to determine its life cycle. The test should be performed until a test piece breaks and or reaches the pre-set number of cycles. Two shoelaces are horizontally crossed in a moveable clamp, rubbing against each other, so as to determine their abrasive resistance. 4 sets of specimens can be tested once.















#### **Martindale Abrasion Tester**

ASTM D4966, ISO 20344, DIN 53863, BS-3424, ISO 12945-2

#### www.WorldofTest.com/martindale.htm

Martindale Abrasion Tester is an ideal and advanced instrument to be used for determination of the abrasion resistance of textile fabrics. Fabrics of all types may be tested by this unit, including woven, non-woven, and knit apparel fabrics, household fabrics, industrial fabrics, and floor coverings, with fabric pile depth of less than 2mm. The resistance of textile materials to abrasion as measured on a testing machine in the laboratory is generally only one of several factors contributing to wear performance or durability as experienced in the actual use of the material. While "abrasion resistance" and "durability" frequently are related, the relationship varies with different end uses, and different factors may be necessary in any calculation when trying to predict durability based on findings from specific abrasion tests. Abrasion resistance is measured by subjecting the specimen to rubbing motion in the form of a geometric figure. Resistance to abrasion is evaluated by various means, including comparison to visual aids in the form of photographs or actual samples.

There is an advanced model of Martindale Abrasion Tester which is equipped with the rubbing figure described in ISO 12945-2 to carry out the pilling test, Easy operatable touch screen. Designed to test 8 specimens simultaneously and shows the number of rubs of different groups separately. Programmable time period for individual group and provision to display the remaining test period.



#### **Frazier Schiefer Uniform Abrasion Tester**

#### ASTM DI 175, ASTM D4158

The Frazier Schiefer Uniform Abrasion Tester is a very versatile instrument that can be used to check the abrasion resistance of materials from tissue paper to concrete depending on the applied force and accessories selected. In addition to this versatility, it is a rugged and reliable instrument that produces very uniform abrasion on a surface area that can range up to four inches in diameter, again depending on the combination of accessories selected for use with the desired sample. The Schiefer Abrasion Testing Instrument has the unique feature of having been specifically designed and based upon the mathematical principle in which every point in the surface of the specimen is equally and uniformly abraded in all horizontal directions. This unique action of multi-directional and uniform abrasion of this instrument is the first essential approach in the measurement of the resistance to abrasion of any material. Resistance to abrasion is one of the most important factors that affect the serviceability of many products. Some of the materials that may be successfully tested for abrasion and wear resistance on the Schiefer Instrument include: most textiles - from carpet through woven, knitted and nonwoven fabrics yarn, felt, plastic film, paper, rubber, leather, laminates, mastic tile, wood, paints, ceramics, stone, metals, and similar materials that can be fitted into the instrument. The extreme versatility of the Schiefer Instrument is also demonstrated in the available abradant. The harshness of the applied abrasive action is readily varied by changing abradants and/or pressure applied to the specimen. The instrument will successfully abrade thin paper, tough plastic or even hard metal. The Schiefer Uniform Abrasion Testing Instrument complies with the conditions set forth in: ASTM DI 175; DART 20.0; and Federal Test Method standard #191, Method 5308 and ASTM D4158; GSA Interim Specifications 00-P-0040D (GSA-FSS); FED-STD-191/5308; FED-STD-191/4308; FED-STD- 191/7308.



#### **Water Penetration Tester**

AATCC 127, JIS L1079/L1092/L1096/K6550, CNS 1479/10461/1481 www.WorldofTest.com/waterpenetrationtester.htm

Water Penetration Tester (Hydrostatic Pressure Tester) is designed and manufactured according to AATCC-127 (American Association of Textile Chemists and Colorists). The main function of these water penetration testers is to test the endurance of waterproof fabric, cloth or other material, as exposed to water. The test method is to use pressing force and environment difference, there are high pressure (0~4000mm/aq) tester, low pressure (0~2000mm/aq) tester and portable type water penetration tester. The testing principle of these three testers is to pressurize by constant pressing force until over three globs come out and stop recording the value of water column high pressure. Another test method is to pressurize by a constant pressing force in a definite period, and watch if there is glob comes out to determine the qualification.



#### **Digital Water Penetration Tester**

AATCC 127, JIS L1079, L1092, L1096, K6550, CNS 1479, 10461, 1481

Digital Water Penetration Tester is aim to test the water permeability-resistance degree for Water-Resistance fiber (or other material) and uses pneumatic grip to speed up the testing time. There are following three kind of test methods.



- a. Water Pressure Method: Put dry specimen on water surface. Then record the water level (cm) at once the specimen is permeated by water on its surface.
- b. Certain Water Pressure Method: Put dry specimen on water surface. Use 1cm/sec speed to raise water level up to a certain level, then record the time (sec) at once after the specimen surface is permeated.
- c. Water Leakage: Operation method same as water pressure. Stop raising the water level immediately when water has raised to a certain position (10cm), to test the water leakage capacity within a certain time

#### **Portable Water Penetration Tester**

AATCC 127, JIS L1079/L1092/L1096/K6550, CNS 1479/10461/1481

#### www.WorldofTest.com/suter.htm

Portable Water Penetration Tester is designed to test the water pressure-resistance of waterproof-fiber cloth or other material, to obtain a precise water-resistance level for these materials. No electricity is required with the portable water penetration tester. The frame of the instrument is made of aluminum and can be used for estimating higher pressures. It can be switched between high pressure and low pressure and is portable for convenience in the field inspection.



#### **Sample Cutters**

#### **Circular Sample Cutter**

#### www.WorldofTest.com/circularsamplecutter.htm

Our fiber cutters use a drawing action to cut accurate circular samples with smooth edges. Even difficult materials such as fine knits, thin films, tissue paper, corrugated cardboard and synthetic leather can be cut conveniently. For testing the weight of unit area of paper and textile, the specimen should be made by neat cutting to lessen burr to keep the measure of area. The weight of unit area can be easily calculated by weighing scale.. The cutting diameter of specimen is 100 cm2. The base is of porous rubber, which allows the cutters to cut into the base with complete safety. With Circular Sample Cutter, samples ranging from thickness 0.01mm to 5mm can be cut.



#### **Slide Fasteners Reciprocating Tester**

#### SATRA TM50

This machine is designed for testing fabric zippers containing metal or plastic teeth. The specimen is pulled down and up for a specified time under a lateral and vertical tension. This machine is designed reasonably and easy to operate, and can show the real-time test times, and will stop automatically when the test time has been reached.



#### **Launder Tester**

## ISO 105-C06:2010, ISO 105-C08:2010, ISO 105-C09:200 www.WorldofTest.com/laundermeter.htm

Launder Tester is designed to evaluate the color fastness to laundering of Textiles. A textile specimen in contact with one or two specified adjacent fabrics is mechanically agitated under prescribed condition of time and temperature in a soap solution, then rinsed and dried. The change in color of the specimen and the staining of the adjacent fabric or fabrics are assessed by comparison with the grey scales. It can automatically adjust temperature, timing and bell-ring, the invariable temperature tank is equipped, pre-heating testing cup to testing temperature.



#### Scorch Tester

## ISO-105, DIN-54060, JIS-L0850, JIS-L0879, JIS-L0880, JIS-L1041 www.WorldofTest.com/scorchtester.htm

Scorch Tester is mainly used for testing the sublimation and firmness of fiber goods. It has electric heated plates between which the specimen is placed for a fixed time period, after which it is taken out and compared with a grey scale to appraise grade of color dyeing sublimation-endurance. The tester compiles with ISO-105; DIN-54060 and other international standards.



#### **Perspiration Tester - Perspirometer**

ISO-105EO4, AATCC-15

#### www.WorldofTest.com/perspirationtester.htm

The Perspiration Tester is used for the test of fading or dyeing-movement in textile, which were soaked by sweat, chloride water, seawater or distilled water. A compound specimen is used to soak in artificial perspiration resolution (separately in acid and alkali) completely. Natural dry for 30 minutes, then use this tester to apply a constant pressure. The specimen is then put in 37°C drying oven for 4 hours. The specimen is removed, left to completely dry, then compared with a gray scale to evaluate the perspiration-resistance level. (Suitable for all fiber)



#### **Spray Tester**

### ASTM-D583-54, AATCC-22-52, JIS-1018, JIS-1092, JIS-L1096, JIS-K6328

#### www.WorldofTest.com/spraytester.htm

The Spray Tester is used to inspect the textile's wetting resistance on the surface. This method is suitable for any fibrous textile processed by water-proof treatment, all kinds of water-proof clothe, raincoat clothe, umbrella clothe, Textile and fiber clothe. Fix specimen on round frame to avoid being wrinkle. Set specimen on testing stand in 45 degrees slope. Pour 250cc. water into glass funnel for dipping on specimen, it may take 25-30 seconds. To test three times (To adopt average value of integer) for observing the absorption degree, realizing the waterproof degree of surface.



#### **Button Impact Resistance Tester**

This instrument is used for measuring the impact resistance of various kinds of buttons with 10mm diameter in the purpose of clothing manufacturing and daily use. Fix button on specimen holder. Release pendulum with specified height and weight to impact the button. Thus, the button strength can be measured.



#### **Bally Waterproofness Tester**

DIN-53338

#### www.WorldofTest.com/ballywaterproofnesstester.htm

This unit is used to test the dynamic waterproofness of leather materials. The waterproofness is determined by immersing a specimen in water and flexing by a constant speed. This machine is controlled by either timer of counter. Also equipped with alarm device and its fixtures are made of aluminum alloy. It test shoe's upper material of leather, synthetic leather, clothe etc. against water penetration.



#### **Bally Leather Flexing Tester**

BS-EN 344, JIS-K6545

#### www.WorldofTest.com/ballyleatherflexingtester.htm

This unit is used to test the flexing-resistance of leather for production of vamp, clothing materials, or bags. The test run with a speed of 100CMP and flexing angle of 22.5°. The test is conducted till the piece of leather cracks. The time taken is recorded for flexing-resistance. It has a memory function and can test more than one specimen at a time. Custom-made number of specimens for test are also available. The test can also be done as per above method for fixed times and note if it has cracked.



#### Frazier Differential Pressure Air Permeability Tester

ASTM D737-96, ASTM F778-88, ASTM C522

#### www.WorldofTest.com/frazierairpermeability.htm

The Frazier Differential Pressure Air Permeability Tester is an instrument that uses the calibrated venturi nozzle testing method combined with a wide differential pressure (pressure drop) range. This is the most reliable and repeatable method of air permeability testing. Other testers using flow gages are utilizing inferior technology. Standard Frazier Air Permeability units will measure 0.1 to 5000 cubic feet of air flow per minute per square foot of sample (2743 cm3/sec/cm2)and a differential water pressure of 0.1" to 21.0" (5231 pascals). Ranges can be extended on all Frazier Models. The Universal Specimen Holder will allow testing of samples up to 6 inches (152 mm) sin thickness. Qualitest offers a variety of air permeability models from simple, economically priced, manually operated units, to sophisticated, automated, electronic units. Qualitest offers an upgrade path from one model to another. The electronic versions (Frazier 2000, Frazier 3000, and Frazier 4000) uses pressure transducers that send results directly to the computer. Unlike other brands, it retains the oil filled manometers as a standard to which the user can check the electronic portion of the unit on a periodic basis. All models and individual units are repeatable to +/-2% of one another.



#### **Motorized Yarn Twist Counter**

#### ASTM D1422, ASTM D1423, ISO 2061, BS 2085, JIS L1095

The Motorized Yarn Twist Counter is used to determine "Twisted level" and "Twisted Shrinkage" of fiber or yarn no matter it is single or twisted. In the production of yarn, Motorized Yarn Twist Counter increase its strength by plied twist. This Motor Twist Counter is to count out the number of twist by un-twisting the yarn, and then division by length of specimen to obtain the number of plied twist per inch. During testing process, percentage of twist shortening is also obtained.



#### Yarn Inspector

CNS-2338

#### www.WorldofTest.com/yarninspector.htm

This tester is used to evaluate whether yarn (thread) lines are even or whether it has a cotton dust, nap, yarn spot faults, and to observe or compare according to the standard sample to evaluate the grade of yarn external, by the method to place all kinds of yarn together on the black board.



#### Stiffness Tester

This Stiffness Tester mainly is used to test the stiffness of cloth. The test procedure consists of hanging the specimen for a specific time and then the shape of specimen will change, dropping or unchanged, which depends on the material and how long it hanged on the suspension bar. Then measure the distance from the top of suspension bar to the lowest point of the loop. This precise textile tester is very suitable for textile industry to measure the stiffness of fabric.





Qualitest Locations:

USA: Plantation, Florida

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