



Plastics Testing Technologies

- Universal Testing Machines
- Block Oven / Aging Oven & Relaxation Tester
- Plastic Pipe Instruments
- Pipe Compression Tester
- Drop Impact and Opacity Tester
- Film Permeability Tester
- Permeability Tester
- Densimeter
- Durometer - Shore Hardness Testers
- Environmental Chambers
- Other Chambers
- Specimen Dies, Molds & Clicker Presses
- MFI, Rheometer and Specimen Preparation
- Creep, Stress, HDT/VICAT Testers
- Environmental Chambers
- Film Thickness Gauges
- MFFT & Seal Testers
- Color Testing Instruments
- More Plastics Testing Instruments

About Qualitest

Qualitest is a global contender and one of the top-ranking manufacturers and suppliers of testing technologies worldwide. With our extensive portfolio of state-of-the-art and competitively priced testing machines, systems and software, we supply standard or customized solutions for many test, measurement and quality control tasks required in the world of modern materials testing.

The key products from Qualitest range include hardness testers, universal testing machines, metallography, materials testing equipment, spectroscopy, microscopy, portable testers, and instruments for testing metals, plastics, rubber, textiles, paper, paint, cement, concrete and packaging materials, as well as technologies for NDT/Ultrasonic, surveying, automotive, aerospace, mining, oil/gas/pipe industries, gold & Jewellery applications and much more.

Plastics

Plastics are made by using microscopic building blocks called hydrocarbons, typically derived from petroleum or natural gas. These monomers (small molecules) are bonded into chains called polymers or plastic resins. Different combinations of monomers yield resins with special properties and characteristics.

General Applications

Plastics are often used to replace other common materials such as metals and wood because of their low cost and durable characteristics. Plastics offer innumerable advantages in production as they are easily softened or melted, and can be molded into any shape. Plastics in general can be divided into two categories: thermoplastic and thermoset processing groups.

Thermoplastic materials are made of polymers or long-chain macromolecules. Heat can transform this material, giving it the flexibility to be formed into tools or key components of other products. This characteristic also allows plastics to be reused or recycled. The other components that make up this material are additives that change properties such as color, stiffness, weatherability, and wear resistance. Thermoplastic materials are necessary for essential manufacturing materials such as sheets, round bars, round bars with a steel core, pipes, and various other sections.

Thermoset plastics are made of polymers that are permanently set through exposure to heat and catalysts during the manufacturing process. As heat can no longer change their shape, these materials are thereby used at higher temperatures and pressures than thermoplastics can withstand.

The ideal combination of processing flexibility and performance enables plastics to be used in an extensive range of applications ranging from low-cost disposable items to expensive specialty parts. Plastics are key materials in the production of automotive parts, electrical appliances, aircraft and aerospace components, sporting goods, packaging, toys, food packaging, and much more. There is no other material that can match the durability of plastic due to its flexibility, fast molding qualities, color absorption, resistance to corrosion, low weight, electrical and thermal insulation, and general toughness and longevity.

The extensive use of plastics requires testing at all stages of development and manufacturing to ensure that products are able to perform well in their intended use. The tests are conducted by companies to guarantee quality control, using internationally standardized methods in the production of all plastic products.

As the characteristics of plastics are influenced by external temperature changes, testing should also be conducted at high and low temperatures. Extreme temperatures can be achieved in environmental chambers, which provide the conditions of real-world applications. For tensile testing, laser and video extensometers are also used for high temperature strain measurements as well as for plastics materials that are sensitive to contact stresses or contamination

Universal Testing Machine - QM-Series

www.WorldofTest.com/universal-testing-machine-qm-series

The Q-Series Universal Testing Machines range is designed for quick and reliable tensile, compression, flexural (bending), shear, peel, fatigue cycling, and constant load tests on metals, composites, alloys, rigid plastics and films, elastomers, textiles, paper, board and finished products.



QM -Series Universal Testing Machine Range									
Model / Specs	QM-2	QM-5	QM-10	QM-20	QM-50	QM-100	QM-200	QM-300	QM-500
Capacity (kN)	2	5	10	20	50	100	200	300	500
Total Cross- head Movement (mm)	400 or 800		650 or 1,100	800 or 1,200	1,000 or 1,100	1,000	1100	1100	1200

Universal Testing Machines - Q-Series

www.WorldofTest.com/universal-testing-machines-q-series

The Q-Series Universal Testing Machines range is designed for quick and reliable tensile, compression, flexural (bending), shear, peel, fatigue cycling, and constant load tests on metals, composites, alloys, rigid plastics and films, elastomers, textiles, paper, board and finished products.



Q-Series Universal Testing Machine Range							
	Bench Models						
Model	ESM303	Q2.5	Q5	Q10	Q25	Q50	Q100
Capacity kN	1.5	2.5 (1 column)	5	10	25	50	100
Capacity lbf	300	550	1,100	2,200	5,500	11,000	22,000

High & Low Temperature Universal Testing Machine

www.WorldofTest.com/high-low-temperature-universal-testing-machine

ASTM D 638 and the equivalent, ISO 527

Environmental system enables the testing of material and components under a variety of real world conditions. Cooperating with environmental chamber, UTM machines can realize variety of tests at low or high temperature.

- It consists of three parts: main frame, grips and moveable high & low temperature cabinet.
- Import full-digital AC servo system and high rigid structure enable high precision of the measuring result. The cabinet, with a double-heat insulation glass door, is convenient to observe the test; stainless steel test cabinet is resistant to corrosive.
- It is nice in appearance, high in precision and easy to operate, also different kinds of grips shall be provided according to your requirement.
- This kind of tester has been authorized CE certificate.



Motorized Force Test System - MT-Series

www.WorldofTest.com/motorized-force-test-system-mt-series

Meeting ASTM D882 & ASTM D3354 Standards

Full-Featured Force Test Stands for Film and Paper

In the past, film extruders, paper producers, converters, and woven/non-woven fabric producers have had the choice of test stands and universal test machines which are either value-priced peak-force-only machines, or expensive computer-operated integral-load cell machines. Now you can have the best of both worlds in a single instrument. The series MT-1500, a simple to use computer operated tester, with Quality Control software for automatic calculation and graphical display of break, elongation, yield, modulus, and other, tension and compression force information.



Programmable Motorized Force Test Systems - ESM 303

www.WorldofTest.com/programmable-motorized-force-test-systems-esm-303

The ESM303 is a highly configurable single-column force tester for tension and compression measurement applications up to 300 lbf [1.5 kN], with a rugged design suitable for laboratory and production environments. Sample setup and fine positioning are a breeze with available FollowMeTM force-based positioning - using your hand as your guide, push and pull on the force gauge or load cell to move the crosshead at a variable rate of speed.

With generous travel, clearance, and depth dimensions, a wide range of tests can be performed, including break testing, cycling, limit testing to a load or distance, load holding, elongation testing, tensile testing, compression testing, and more. Satisfy various test methods through an easy-to-use menu, allowing the configuration of test speed, force and distance limits, cycling, preload, and many other functions, all protected by a password. Save up to 50 profiles to accommodate a range of test methods.

When the ESM303's clearance is insufficient for the application, its modular mechanical design allows for single- and double-column extensions. Modularity extends to the controller functions as well. Individual functions, such as travel measurement, cycling, load holding, etc., may be purchased either upfront or enabled in the field through an activation code. This a-la-carte platform allows for custom configuration as appropriate for the application and budget.



Electronic Tensile Tester - QT-ETT

www.WorldofTest.com/electronic-tensile-tester-qt-ett

ASTM D828, ASTM E4, ASTM D882, ASTM D1938, ASTM D3330, ASTM F88, ASTM F904, ISO 37, JIS P8113 QT-ETT tensile testing equipment are specially designed considering tensile testing requirements for flexible materials that are commonly used in product packaging to study different properties of materials.

This instrument utilizes Qualitest's latest embedded control system and operating software, with user-friendly operating interface and intelligent data management system.



High Performance Charpy / Izod Impact Tester Q-Impact 50

www.WorldofTest.com/high-performance-charpy-izod-impact-tester-q-impact-50

ISO 179, ISO 180, ASTM D256

The Q-Impact 50 High Performance Charpy/ Izod Impact Tester is a high performance impact tester designed to precisely determine the absorbed impact energy and resistance to breakage of plastic specimens. The tester conforms to both ASTM and ISO standards. The innovative design allows this tester to be used for both Izod and Charpy test. The max capacity of this tester is 22J (Izod) and 50J (Charpy)

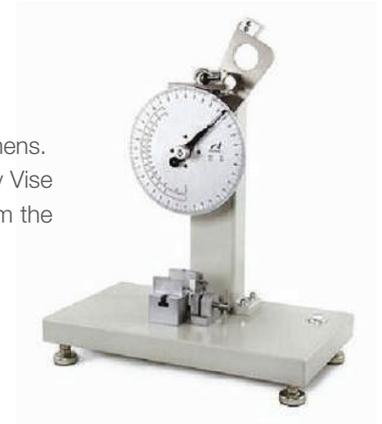


Analog Izod / Charpy Impact Tester - QPI-IC

www.WorldofTest.com/analog-izod-charpy-impact-tester-qp-i-c

ASTM D256 - ISO 180

The QPI-IC Basic Izod Impact Tester determines the energy required to break standard plastics impact specimens. Meeting the corresponding ASTM, & ISO test methods, this equipment is equipped with both Izod and Charpy Vise and made according to their respective standards. Users can read the endurance of impact strength directly from the scale.



Impact Specimen V-Notcher QuickNotch-II

www.WorldofTest.com/impact-specimen-v-notcher-quicknotch-ii

Automatic Notch Maker is designed to notch specimens for Charpy & Izod impact tests.

- 20 specimens may be clamped at one time and at least 100 specimens may be notched in 10 minutes.
- It allows a perfect reproducibility of the notches, increases working efficiency and reduces the labor intensity.



Film Impact Tester - QT-FIT-3J

www.WorldofTest.com/film-impact-tester-qt-fit-3j

ASTM D3420

The impact resistance of films is obtained by measuring the energy consumed by hemispheric impact head to make films rupture under controlled impact conditions to evaluate the impact resistance of material and its effects.



Hydrostatic Pressure Tester

www.WorldofTest.com/hydrostatic-pressure-tester

ASTM D-1598, ASTM D-1599, ISO 1167

Conforming to ISO 1167 and ASTM D 1598 & 1599, the Hydrostatic Pressure testing system is mainly used to determine the resistance of thermoplastics pipes to constant internal water pressure at constant temperature. This system is mainly used in testing the short-time hydraulic failure and resistance to constant internal pressure of the plastic pipes for the transport of fluids.

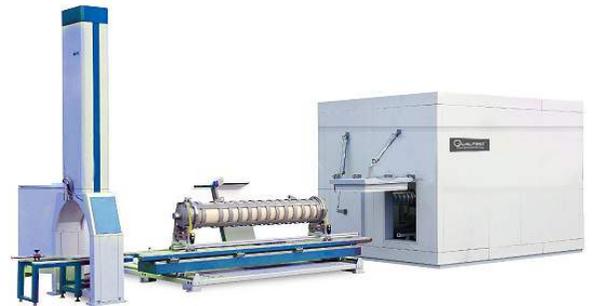


Rapid Crack Propagation (RCP)

www.WorldofTest.com/rapid-crack-propagation-rcp

ISO 13477

Rapid Crack Propagation (RCP) is used to determine the critical pressure or critical temperature for rapid crack propagation.



Piping System Joints Leak Tightness Tester

www.WorldofTest.com/piping-system-joints-leak-tightness-tester

ISO 4422-2:1996, ISO 13844:2000 and the equivalent

Piping System Joints Leak Tightness Tester is used to determine the leak tightness of elastomeric sealing ring type of joints for buried thermoplastic non-pressure piping systems.



Thermal Recycling Testers

www.WorldofTest.com/thermal-recycling-testers

ASTM F1335, ISO 15874, ISO15875, ISO 15876, ISO 15877

The Thermal Recycling Testers for Plastic Pipes is used to evaluate the function of hot and cold water-pipes PP, PE-X, PVC-C, PB, under a certain pressure for 5000 cycles. A test assembly of pipes and fittings is subjected to temperature cycling by the passage of water under pressure using hot and cold water alternately for a specified number of cycles. While being subjected to temperature cycling parts of the assembly of pipes and fittings are maintained under tensile stress and/or flexural strain by the use of static clamps.



Pipe Cutting and Chamfering Machine

www.WorldofTest.com/pipe-cutting-and-chamfering-machine

The Pipe Cutting and Chamfering Machine is used for cutting and chamfering big pipes. It is an ideal machine for pipe manufacturers as well as quality inspections and research institutions.



Pipe Notch Milling Machine

www.WorldofTest.com/pipe-notch-milling-machine

SO 13479:1997

- With Industrial PLC control and moveable large size full color touch screen display terminal.
- Module design for the whole system, and milling knife is over the test piece, it is easy to observe.
- In order to control cutting speed, servo system is introduced to control knife rotation speed and feeding speed



Elongational Stress Tester

www.WorldofTest.com/elongational-stress-tester

ISO11542-2:1998

Elongational Stress Tester is designed to determine the elongational stress of ultra-high molecular weight Polyethylene (PE-UHMW) molding and extrusion material. The elongational stress is a characterization of the melt viscosity of PE-UHMW moulding powder, whose melt flow rate cannot be determined by the method specified in ISO1133 because of its extremely high molecular weight.



Drop Weight Impact Tester for Plastic Pipes

www.WorldofTest.com/drop-weight-impact-tester

300C (ISO 3127, EN744, EN1411) & 300D (ASTM D2444)

The Falling Weight Impact Tester is used to perform impact tests on plastic pipes, conforming to ISO 3127, EN744 and EN1411. Test pieces are subjected to blows from a falling striker, of specified mass and shape, dropped from a known height onto specified positions around the circumference of the test piece. The true impact rate of the batch, or production run from an extruder, is estimated.



Ring Stiffness Tester

www.WorldofTest.com/ring-stiffness-tester

ISO 9969-2007, ISO9967

The Ring Stiffness Tester RST30 is designed to measure the ring stiffness, ring softness and creep rate for plastic pipe. The unique design makes this tester especially suitable for large diameter pipe. The RST30 features built in measurement of the inner diameter of the pipe and the compression plate load-cell interface is designed to reduce the risk of damaging the load cell during testing. The rigid compression plates ensure the results will be free of machine deflection and increases the accuracy of the test results.



Manhole Mechanical Properties Tester

www.WorldofTest.com/manhole-mechanical-properties-tester

ASTM D 2412-2002, BS EN 13598-1

Manhole Mechanical Properties Tester is designed to determine the performance of inspection chamber, manhole frame as well as manhole wall. It can be used to test shear strength and the axial loading performance of manhole base; it can also be used to test Ring stiffness, flatness and ring flexibility.



Static Constant Loading Tester for Thermoplastic Manhole

www.WorldofTest.com/static-constant-loading-tester-thermoplastic-manhole

BS EN 13598-1:2003

Static constant loading tester is mainly used to determine the resistance to the axial static constant load of plastic manhole.

A constant force is steadily loaded on the axial direction of the manhole for the specified time, when test is finished, observing the sample appearance (deformation, collapse, crack or crazing), determine the deformation in axial direction and calculate the deformation ratio of manhole.



Buckling Resistance Tester for Thermoplastic Drainage Cover

www.WorldofTest.com/buckling-resistance-tester-thermoplastic-drainage-cover

BS EN 14830:2006, BS EN 13598-2:2009

Buckling Resistance Tester is used to simulate the conditions when manhole is buried underground and for checking its resistance to the force from underground water.



Manhole Impact Tester

www.WorldofTest.com/manhole-impact-tester

BS EN 13598-2:2009

Manhole Impact Tester is used to test the impact performance of manhole base and manhole wall.



Gardner Impact Tester

www.WorldofTest.com/gardner-impact-tester

ASTM D 2794, D 5420, D 3029, D 4226 and G14

Qualitest offers extensive range of advanced plastics and color testing equipment such as Gardner Impact Tester which is a widely used device for the coating and plastic industries.



Drop Dart Impact Tester for Plastics Film

www.WorldofTest.com/drop-dart-impact-tester-plastics-film

Drop Dart Impact Tester - ASTM D1709

Series DX-8000 Dart Impact testers Full-Featured models for Film and Sheet

The Model DX-8285A Drop Dart Impact tester with Pneumatic Sample Clamp and Pneumatic Dart release Mechanism

We offer the Series DX-8000, a simple to use stand-alone, non-instrumented tester, for measuring impact resistance of film, sheet, and laminated materials.



Pipe Opacity Tester

www.WorldofTest.com/pipe-opacity-tester

ISO 7686:2005

The Pipe Opacity Tester is used to determine the opacity of pipes and fittings. It is an ideal device for pipe manufacturers, research and inspection institutions. It consists of optical source, Luminous flux collection system, and automatic specimen going in/out controlling system, specimen automatic moving device and specimen support.



www.WorldofTest.com/film-permeability-tester

Gas Permeability Tester - QT-GPT

www.WorldofTest.com/gas-permeability-tester-qt-gpt

ASTM D1434, ISO 15105-1, ISO 2556, JIS K7126-A

Gas Permeability Tester- QT-GPT-500 is used to test the gas transmission rate (GTR) of packaging material by differential pressure method.

This instrument is generally used to measure transmission rate of Oxygen (O₂), Nitrogen (N₂), Carbon dioxide (CO₂), and other Non-inflammable and non-etchant gases through and packaging container so as to ensure the quality of material inside package is maintained as required.

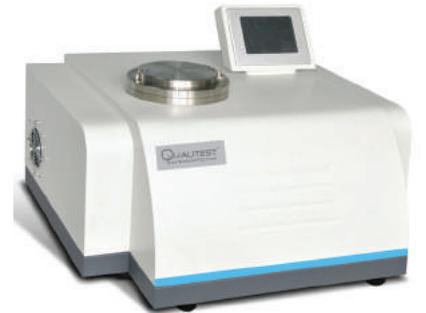


Gas Permeability Analyzer for Textile

www.WorldofTest.com/gas-permeability-analyzer-textile

ISO 9237, ASTM D 737, BS 5636

Gas Permeability Tester - QT-GPT-700 is designed to test the gas transmission rate of various textiles, including household textile, industrial textile, non-woven fabrics and other materials such as sponge, paper etc.



Oxygen Permeability Tester - QT-OPT-201

www.WorldofTest.com/oxygen-transmission-rate-tester

ASTM D3985, ASTM F2622, ASTM F1307, ASTM F1927, ISO 15105-2, DIN 53380-3, JIS K7126-B

Oxygen Permeability Tester - QT-OPT-201 is ideal for industrial application laboratory testing of material for Oxygen permeability testing for quality control, research and development on plastic, metal, paper and rubber materials that are generally used as packaging materials for storage, preservation or transportation of perishable and oxidizable materials.

It can also be used for research laboratories to evaluate and define permeability behaviour of material.



Oxygen Permeability Tester - QT-OPT-210

www.WorldofTest.com/oxygen-permeability-tester-qt-opt-210

ASTM D3985, ASTM F1927, ASTM F1307, ASTM F2622, ISO 15105-2, DIN 53380-3, JIS K7126-B

Oxygen Permeability Tester - QT-OPT-210 is ideal for advanced Oxygen permeability testing for quality control, research and development on plastic, metal, paper and rubber materials that are generally used as packaging materials for storage, preservation or transportation of perishable and oxidizable materials.



Oxygen Permeability Analyzer - QT-OPT-300

www.WorldofTest.com/oxygen-permeability-analyzer-qt-opt-300

ASTM D3985, ASTM F1927, ASTM F1307, ASTM F2622, ISO 15105-2, DIN 53380-3, JIS K-7126

QT-OPT-310 Oxygen Permeability Tester is designed to test the oxygen transmission rate (OTR) of a wide range of packaging materials such as plastic film, composite film, coextrusion film, aluminum foil, aluminum-plated film, infusion bag, sheets, solar panel, cellophane, ceramics, porcelain, and various containers like bag, pouch, bottle, can, bowl, box that widely used in the industries of food, pharmaceuticals, personal care, household, electronics by coulometric sensor method.



Water Vapor Transmission Rate Tester - QT-WVP-202

www.WorldofTest.com/water-vapor-transmission-rate-tester-qt-wvp-202

Electrolytic Method

QT-WVP-202 Water Vapor Permeability Tester is designed to test the water vapor transmission rate (WVTR) of a wide range of packaging materials such as plastic film, composite film, coextrusion film, aluminum-plated film, aluminum foil, infusion bag, sheets, solar panel, cellophane, ceramics, porcelain and various containers like bag, pouch, bottle, can, bowl, box, etc. that widely used in the industries of food, pharmaceuticals, personal care, household, electronics by electrolytic method.



Water Vapor Permeability Tester - QT-WVP-300

www.WorldofTest.com/water-vapor-permeability-tester-qt-wvp

ASTM E96, ASTM D1653, ISO 2528, DIN 53122-1, TAPPI T464, JIS Z0208

Gravimetric Method - Wet Cup

Water Vapor Permeability Tester QT-WVP-300 series is used to test the water vapor transmission rate (WVTR) of a wide range of materials by Gravimetric Method. It is ideal for advanced water vapor permeability testing for research and development companies and has the reliability, speed, versatility and accuracy required for Quality Control testing.



Water Vapor Permeability Analyzer - QT-WVP-360

www.WorldofTest.com/water-vapor-permeability-analyzer-qt-wvp-360

ASTM E96, ASTM D1653, ISO 2528, TAPPI T464, DIN 53122-1, JIS Z0208

Gravimetric method

Water Vapor Permeability Analyzer - QT-WVP-360 is used to test the water vapor transmission rate of various materials, including: plastic film, composite film, aluminum-plated film, aluminum foil etc.; sheets, such as PP sheet, PVC sheet, rubber, building material, porcelain; other application, such as solar panel, paint film, medical patch etc. It is widely used in packaging, plastic film, food, pharmaceuticals, personal care industries, inspection agency, research institute, college and so on.



Water Vapor Permeability Tester - QT-WVP-400

www.WorldofTest.com/water-vapor-permeability-tester-qt-wvp-400

ASTM F1249, ISO 15106-2, TAPPI T557, JIS K7129

Infrared detection sensor method

Water Vapor Permeability Tester QT-WVP-400 series is used to test the water vapor transmission rate (WVTR) of packaging materials, such as plastic film, composite film, coextrusion film, aluminum-plated film, aluminum foil, infusion bag, sheets, paper, paper board, solar battery panel, cellophane, ceramics and porcelain, and various containers such as bag, pouch, bottle, can, bowl, box, widely used in the industries of food, pharmaceuticals, personal care, household, electronics and so on.



Water Vapor Permeability Tester - QT-WVP-500

www.WorldofTest.com/water-vapor-permeability-tester-qt-wvp-500

ASTM E96, ASTM D1653, ISO 2528, TAPPI T464, DIN 53122-1, JIS Z0208

Gravimetric method

Water Vapor Permeability Tester QT-WVP-500 series is used to test the water vapor transmission rate (WVTR) of a wide range of materials by Gravimetric Method. It is ideal for advanced water vapor permeability testing for research and development companies and has the reliability, speed, versatility and accuracy required for Quality Control testing.



Gas Chromatography Tester

www.WorldofTest.com/gas-chromatography-tester

QT-GCH-9800 Gas Chromatography Tester is designed to separate organic solvents. It is able to test solvent residues of printed packaging material, or the purity of a single solvent.



Gas Generator

www.WorldofTest.com/gas-generator

QT-GGE-300 Gas Generator generates high purity nitrogen, hydrogen and air. It can supply stable and high quality gas for Gas Chromatography.



www.WorldofTest.com/specific-gravity-tester-densimeter

Densimeter - EW-300SG

www.WorldofTest.com/densimeter-ew-300sg

- Only 10 seconds to measure density and volume.
- Ideal machine for interval testing in a production line.



Densimeter - MD-300S

www.WorldofTest.com/densimeter-md-300s

- Popular model with resolution of 0.001g/cm³. (Upgraded from previous model MD-200S)
- Compact body and accurate density measurement for solid and liquid samples.



Densimeter - SD-200L

www.WorldofTest.com/densimeter-sd-200l

- Top precision model with density resolution of 4 decimal places for both Solid and Liquid.
- Suitable for plastic pellets, films, rubbers, fabric, advanced materials, and liquid density in the field of medical, food, and chemical that require accuracy.



Densimeter - MDS-300

www.WorldofTest.com/densimeter-mds-300

- Easy density measurement of not only solid and liquid sample density, but added functionality to measure powder density with resolution of 0.001g/cm³ and reference value of 0.0001g/cm³.
- Newly designed sensor and auto-weighing function for improved accuracy and working efficiency.



Densimeter - MDS-3000

www.WorldofTest.com/densimeter-mds-3000

- Measuring capacity up to 3kg
- Wide measuring capacity enables to measure the samples without cutting, and calculates an average density for the whole sample.
- Sensor & water tank size can be customized depending on the sample size.
- Easy and convenient "auto-weighing function" as a standard feature.



Analog Durometer HP-Series

www.WorldofTest.com/analog-durometer

Our range of Shore Durometer - HP Series Durometers are suitable for accurate hardness measurement of all natural and synthetic rubber products, plastics, acrylic glass, acetates, casting resin, polyester, thermoplastics, PVC, neoprenes, hardboards, wood, leather, and fruits within the Shore A, A0, B, 0, C, D, D0, 00, 000, 000S, E, Qualitest Variant C (Asker C), L/c. These durometers are the highest precision models on the market with very easy handling.



Digital Durometer HPE-II

www.WorldofTest.com/digital-durometer-hpe-ii

High-end Durometers with the highest quality and accuracy on the market.

DIN ISO 7619, DIN EN ISO 868, NF EN ISO 868, ASTM D 2240 (DIN 53505)

Digital Shore Durometer - HPE-II Series Digital Durometers are high-end hardness testers for accurate and repeatable hardness measurement of rubber, plastics and other elastomers within the Shore A, A0, B, 0, C, D, D0, 00, 000, 000S, E, scales and much more. This portable handy instrument is available in the widest range of scales and L/c as well as Variant C (Asker C), CS, F and BARCOL.



Digital Shore Hardness Tester HPE III

www.WorldofTest.com/digital-shore-hardness-tester-hpe-iii

Shore Hardness - Specimen/Environment Temperature - Humidity

DIN ISO 7619, DIN EN ISO 868, ASTM D2240, NF EN ISO 868, JISK 6253

Qualitest offers Digital Hardness Tester HPE III which provides significant test data for the use in laboratory or field.

Companies that develop or use the products made of soft elastic materials produce, have usually a laboratory in which the products and raw material are regularly tested according to the standard.



Pusey & Jones Hardness Tester – Plastometer

www.WorldofTest.com/pusey-jones-hardness-tester-plastometer

ASTM D 531

Our top quality Pusey & Jones (P&J) hardness tester (Plastometer) serves for the determination of the penetration depth on rubber and elastomer materials like rubber rollers and standard blocks made of rubber with a minimum thickness of 13 mm as well as paper rollers.

The electronic dial gauge is integrated in the instrument and shows the indentation depth to an accuracy of 3 decimal places (0.000 mm). With the help of a vertical spindle which is integrated on the back of instrument, the dial gauge can be moved up and down conveniently and precisely.



Automatic Motorized Durometer - Digi-Test II

www.WorldofTest.com/automatic-motorized-durometer

The most accurate and versatile hardness tester on the market, DigiTest positions itself as the top level Shore/IRHD hardness tester with a modular design to suit virtually every Shore or IRHD hardness measurement scale for Polymers. The automatic test procedure of DigiTest eliminates the operator's test influence on test procedure and thus always provides the most accurate results.

Depending on the hardness scales of your choice, from any of Shore scales A, A0, B, 0, C, D, D0, 00, 000, 000 S, E, micro Shore A, micro Shore D, C, D0, IRHD/DIDC M, N, H, L, VLRH, you can select the most cost effective combination of required test heads, and expand and upgrade it at any time in the future.



IRHD Micro Hardness Tester III

www.WorldofTest.com/irhd-micro-hardness-tester-iii

The IRHD Micro Hardness Tester III - New Generation - 3rd series of this popular IRHD Hardness Tester line has a more convenient and user-friendly operation. Accurate IRHD Micro hardness measurement of soft elastomers such as O-rings, seals and gaskets, with thickness down to 0.6mm, is guaranteed.

IRHD Micro Hardness Tester III - New Generation offers new advantages, with an excellent price/quality ratio. Testing of O-rings, molder samples with irregular shapes, seals, etc. are ideal applications for this model. A quick center lever allows quick and precise positioning of the samples and the measuring head comes with integrated display and keypad for ease of use. IRHD Micro Compact III comes with standard RS-232 data interface as well as exchangeable indenters.



Automatic Hardness and Density Testing

www.WorldofTest.com/automatic-hardness-and-density-testing

The revolutionary HDA consists of a hardness tester and a density measuring system which allows tests to be carried out automatically. This is an automatic system specialized for high capacity test.

- New product for automatic heavy duty application
- Test up 4000 samples
- Integrated systems to optimize performance



Temperature Controlled Automatic Motorized Durometer

www.WorldofTest.com/temperature-controlled-automatic-motorized-durometer

The revolutionary Temperature Controlled Automatic Motorized Durometer - Digi-Chamber - SHORE & IRHD Scales consists of a Digi-Test II Hardness Tester and a temperature chamber which allows tests to be carried out at above or below ambient temperature. With the function of temperature control, the specimen can be examined of its hardness change in extreme temperature conditions. This kind of test is ideal for the automobile and tire industries as most of the rubber parts are required to sustain critical temperature changes. The entire system can be controlled by a touch panel with colored display providing easy-to-use controls.



www.WorldofTest.com/environmental-chambers

Environmental Chamber

Environmental chamber is designed for testing the capability of heat-endurance, cold-endurance, dryness-endurance, and humidity-endurance, suitable for quality control of the industries of electron, electrical equipment, vehicle, metal, foodstuffs, chemistry, building materials, luggage, adhesion tape, printing, packaging, etc.



Environmental Test Chamber

Environmental Test Chamber simulates a full range of temperature and humidity conditions to test reliability, durability, climatic, freezing resistance, quality assurance, thermal endurance, plastic products, electrical appliances, instruments, food, vehicles, metals etc.



Temperature Humidity Chamber

Temperature humidity chamber is used to test material structure or composite, in the high temperature and ultralow temperature continuous environment. Suitable for electronic, LED lighting industry, auto parts, chemical industry, building materials, mobile computers, batteries, plastic, metal, rubber etc.



Climatic Chamber

Qualitest's Climatic chamber is designed to do high temperature & high humidity, high and low temperature, or temperature cycling test, Climatic chamber mainly used for quality checking and assessing their quality reliability and life test.



Ozone Tester / Ozone Chamber

Ozone test chamber is a major factor in rubber cracking although it is rare in the atmosphere, ozone aging tank simulates and enhance the condition of ozone in the atmosphere to study the effects of ozone on rubber, and then identify and evaluate the method to resist ozone and aging for rubber, adopt effective anti-aging measures to enhance the life of rubber products.



Xenon Test Chamber

Xenon test chamber is affordable, full-featured, and has a large specimen capacity. It provides precise control of critical test parameters including spectrum, irradiance, relative humidity, chamber temperature and black standard temperature.



Thermal Shock Chamber

Thermal Shock Chamber can be used for testing most commercial products to see how they withstand drastic temperature changes. A thermal shock chamber will subject a product to the most extreme temperature conditions, instantly.



UV Test Chamber

UV test chambers have been developed to provide a UV weathering. The UV simulates the effect of sunlight with fluorescent ultraviolet (UV) lamps, while rain and dew are simulated by the condensation of humidity.



Walk in Chamber

www.WorldofTest.com/walk-chamber

Walk in test chamber simulates the effects that a range of temperature and humidity conditions have on a product or material.



Rain Test Chamber

Rain Test Chamber is designed according with the standards of IEC 60529-2001 and mainly used for electronic products to do the waterproof test.



Salt Spray Tester

www.WorldofTest.com/salt-spray-tester

ASTM-B117, JIS-D0201, JIS-H8502, JIS-H8610, JIS-Z2371, GB/T 10125

The Salt Spray Tester – Salt Spray Cabinet – Chamber – Fog Apparatus is used to create and maintain the spray (fog) test environment, and test the anti-corrosion quality of all the materials surfaces after the rust-proof of painting, coating, electroplating, anodizing and rust-proof of greasing. Our salt spray testers available in capacities meet ASTM-B117, JIS-D0201, JIS-H8502, JIS-H8610, JIS-Z2371 and other International Standard test methods. Power supplied can be configured upon request.



Freezing Tester

www.WorldofTest.com/freezing-tester

Our Freezing Tester units are available in vertical or horizontal configurations are used to test the bending/flexing durability of rubber, plastics, synthetic leather, shoes, etc., under cold temperatures as low as -30°C or -70°C depending on the selected model. The test chambers can be equipped with a variety of flexing/bending fixtures made of stainless steel. These models conform to ASTM D 1790, and ASTM D1593 standards.



Specimen Dies & Clicker Presses

www.WorldofTest.com/specimen-dies-molds

Specimen Cutting Dies

Fully Certified ASTM, DIN and ISO dies.

ASTM Standard Cutting Dies

ASTM D -412 A to F Tensile Sample Cutting Die	ASTM D -1708 Micro tensile Die
ASTM D -638 Type I -VTensile Die	ASTM D -1004
ASTM D -1822 -S	ASTM D -1922
ASTM D -624 B Tear Sample Cutting Die	ASTM D -746
ASTM D -624 B Tear Sample Cutting Die with Slit	ASTM D -746 T50
ASTM D -624 C Tear Sample Cutting Die	ASTM D -1938
ASTM D -624 T Tear Sample Cutting Die	Other ASTM Dies Available Upon Request



Specimen Molds

Our molds are made of P20 tool steel that is hardened, ground and polished, then chrome-plated with the option of Teflon coating.

Both molds and dies meet most national and international standards such as ASTM, DIN and ISO.



Manual Test Sample Clicker Press

www.WorldofTest.com/manual-test-sample-clicker-press

Clicker Press units operate well in stand-alone cutting situations, and also compliment a Hydraulic press for smaller operations.

With the single lever rotation and compressing action, its speed of operation is quite surprising and you can be up and cutting for a fraction of the cost of a hydraulic press.



Auto-Pneumatic Clicker Press

www.WorldofTest.com/auto-pneumatic-clicker-press

This low-cost and high quality Pneumatic clicker press only requires air with min. 73 psi (5 bar) pressure to operate and is widely used in the rubber and plastics industry for accurately cutting rubber, plastics, and leather specimens. The Auto-Pneumatic clicker press is available in 3 or 5 ton capacities suitable to cut rubber samples with thickness up to 10 or 15mm respectively. This compact, cost effective and high quality sample cutting press can be used for any testing laboratory.



Laboratory Sized Swing Arm Clicker Press

www.WorldofTest.com/hydraulic-swing-arm-clicker-press

QTSE Series Hydraulic Swing Arm Clicker Presses are the most widely used die cutting machines in the world. Qualitest has 20 years' experience in manufacturing clicker presses which is considered the world's leading producer. The constant attention to customer's feedback has allowed us to produce a product able to satisfy the needs of reliability, productivity and energy savings.



Melt Flow Indexer - Quali-Fi 6000/3000 Series

www.WorldofTest.com/melt-flow-tester-mfi

ASTM D1238, ISO1133

Quali-Fi 6000 Melt Flow Indexer Series can be used for testing MFR and MVR of polycarbonate, fluoroplastics, as well as polyethylene, polypropylene, ABS, POM, etc and is related to the melted material viscosity. It enables the operator to estimate the mean molecular weight and at the same time gives an indication of melt flow ability through the die.

MFI-3000 Series Melt Flow Indexers, with integrated touch panel display measure the melt mass-flow rate (MFR), melt volume-flow rate (MVR), as well as Melt density test according to the standards ASTM D1238 (A & B Methods), ISO 1133.



Capillary Rheometer

www.WorldofTest.com/capillary-rheometer

Qualitest offers a full range of capillary rheometers that offers state-of-the art features and will meet the demands of a 24-hour a day shop floor operation while maintaining the highest possible level of accuracy, repeatability and sensitivity for R&D applications. Qualitest line of capillary rheometers is versatile and easy to use yet they offer the most sophisticated materials characterization, data analysis, and reporting capabilities. Our Capillary Rheometers are available with 10 or 25kN load cells, single or double barrel configuration and optional features to meet all the needs of QA and R&D in the industry.



SpeciCut II-P

www.WorldofTest.com/sample-preparation-machine-specicut-ii-p

Hard Plastic Tensile Specimen Cutting Machine

The Sample Preparation Machine - Specicut II-P is a manually operated, economical way to prepare tensile bars and other samples. The Sample Preparation Machine - Specicut II-P is an enclosed machine which includes integral misting, chip removal and motor speed regulation units. The chip shield around the control head protects the area around the unit from debris, while the sound deadening package absorbs much of the noise of the unit. A series of power switches located on the front of the panel enables the operator to easily access those accessories desired, while the emergency stop switch located on the machine cuts power to all systems simultaneously.



Molding Press for Plastics Sample Preparation

www.WorldofTest.com/molding-press-plastics-sample-preparation

Proper sample preparation will achieve accurate and consistent results. Most variation in testing occurs before the test is performed as sample preparation plays a major role in final results. These machines are convenient for preparing samples as they ensure uniform process and save time.



Full Notch Creep Tester - QT-FNCT-6 Series

www.WorldofTest.com/full-notch-creep-tester

ISO 16770 and ISO3501

Full Notch Creep Tester (FNCT) - QT-FNCT-6 Series - For Testing of Plastics Materials is used to determine the stress cracking resistance of polyethylene materials in any environment. A test specimen in the form of a square-section bar with coplanar notches in each face at the center is subjected to a static tensile load in a temperature-controlled environment (ie. air, water, surfactant solution). The geometry of the specimen is such that plane strain conditions are obtained and brittle failure occurs under appropriate tensile load and temperature conditions. The time for this brittle failure to occur after loading is recorded.



Environmental Stress-Cracking Tester

www.WorldofTest.com/environmental-stress-cracking-tester

ASTM D1693-01

The environmental stress cracking chamber is used to determine of the susceptibility of ethylene plastics, as defined in terminology D883, to environmental stress-cracking when subjected to the conditions specified in ASTM D1693-01, under certain conditions of stress and in the presence of environments such as soaps, wetting agents, oils, or detergents, ethylene plastics may exhibit mechanical failure by cracking.



HV-3000-D3 / D6 HDT / VICAT Tester

www.WorldofTest.com/hdtvicat-heat-deflection-testers

ASTM-D648, ASTM-D1525, ISO-75, ISO-306, DIN 53461, DIN 53460

HDT/VICAT Systems offer Heat Distortion Temperature (HDT) and Vicat Softening Point of plastic materials. Qualitest offers a single station economical Heat Deflection tester, while the HV - 3000 Systems and HDT Series Heat Deflection Tester offer sophisticated control using Windows based software.



Heat Deflection Tester - HDT Series

www.WorldofTest.com/heat-deflection-tester-hdt-series

ASTM D648, ISO 75

Heat Deflection Temperature Tester HDT Series is a single or multiple station and low-cost system designed in accordance to ASTM D648 as well as ISO 75 to measure material's ability to perform for a short time at elevated temperatures while supporting a load. The test measures the effect of temperature on stiffness: a standard test specimen is given a defined surface stress and the temperature is raised at a uniform rate.



Film Thickness Tester - MX-Series

www.WorldofTest.com/mx-series-film-thickness-tester

In the past, film and paper producers and converters have had the choice of caliper gauges which were either value-priced thickness-only machines, or expensive computer-operated machines. Now you can have the best of both worlds in a single instrument. The MX-series Micro Gauges are simple to operate, stand-alone or PC-operated testers with optional Quality Control software for automatic calculation and graphical display of thickness profiles, statistics, and other information



Thickness Tester - CX-Series

www.WorldofTest.com/thickness-tester-cx-series

The Thickness Tester - CX-1020 revolutionized capacitance film thickness gauging with the introduction of our patented AutoCal™ concept - by adding an absolute (contact) measurement probe with the capacitance sensor, the Thickness Tester - CX-1020 is self-calibrating. No more need to create detailed recipes to recall calibration information. Accidental operator errors are reduced, accuracy is increased, because different polymers and blends require different calibration values.



Minimum Film Formation Temperature Tester

www.WorldofTest.com/minimum-film-formation-temperature-tester

DIN 53787 - DIN 53 366 – ASTM D 2354 - ASTM D 1465 – ISO 2115 - ISO/DIS 4622

Test instrument with a ground hard-chrome plated metal plate as a measuring plate for depositing the specimens. By heating and cooling the measuring plate any variable temperature gradient within the range of -30°C to +250°C can be produced and kept constant for any given period.



Heat Seal Tester - QT-HST-E

www.WorldofTest.com/heat-seal-tester-qt-hst-e

ASTM F 2029

Qualitest QT-HST-E is heat seal testing equipment specially designed to simulate heat sealing condition and affecting parameters for determination of heat sealing ability of plastic films, composite films, coated paper, and other sealing films under specified sealing conditions.



Portable Spectrophotometers - Color Meters

www.WorldofTest.com/portable-spectrophotometers-color-meters

Qualitest offers extensive range of advanced plastics and Color testing equipment such as Portable Spectrophotometer – Spectro-Guide & Color-Guide which is used for total Appearance Control - color and gloss in one unit.

Mobile Color Measurement. Store up to 200 standards with tolerances and 999 samples in the color-guide's memory and control color whenever and wherever it is needed.



Gloss Meters - Micro-Gloss

www.WorldofTest.com/gloss-meters

A gloss meter measures the specular reflection. The light intensity is registered over a small range of the reflection angle. Our comprehensive range of competitive and reasonably priced gloss meters include economical models as well as advanced versions measuring single angles or TRI angles.



Light Booths - Visual Color Control

www.WorldofTest.com/light-booths-visual-color-control

Colors appear differently under different lighting conditions. Use of a light booth to simulate different lighting conditions helps to obtain objective color assessment, improves communication and reduces product rejections. We offer a complete line of light booths which allow you to see what your product will look like – independent of location and environmental influences.



Orange Peel / DOI Meter - Wave Scan

www.WorldofTest.com/orange-peel-doi-meter-wave-scan

Appearance control is no longer limited to final topcoat inspection. The orange peel meter scans the optical profile of high gloss surfaces using a laser light source. An additional, infrared –high energy LED allows measuring the same structure spectrum (0.1 – 30 mm) on medium gloss surfaces. The dullness measurement is recorded with state-of-the-art CCD camera technology. It gives information on the image forming qualities of the surface caused by structures < 0.1mm.



Automatic Film Applicators

www.WorldofTest.com/automatic-film-applicators

The Byko-drive Automatic Applicator is an economical film applicator that improves the consistency of draw-downs. When more than one operator is drawing down the same coating or ink, the dry film appearance will vary because of different drawdown techniques. Drawdown speed and pressure on the applicator tool will impact the result. Film thickness, gloss, opacity, and color can vary with differing drawdown techniques. The byko-drive is available with a vacuum plate or glass plate with clamp. Applicator bars, U-shaped bars, applicator frames, film casting knives, and wire-wound rods are acceptable applicators. The byko-drive has a compact design consisting of a light-weight aluminum chassis and impact resistant thermo-plastic cover.



Gel Timer

www.WorldofTest.com/gel-timer

These gel timers are perfect for determining the gel time of resinous plastics, adhesives, curing oils, two component elastomers, and paints. A low torque, synchronous motor rotates a specially shaped stirrer in the catalyzed resin or elastomer. As gelation occurs, drag exceeds torque and the motor stalls. This signals an electronic circuit which stops the clock and activates a flashing lamp. The gel time will show on the LCD display.



Viscometer

www.WorldofTest.com/viscometer

Qualitest's viscometers are designed to measure the viscosity of liquids. The versatility of Viscometer makes these instruments a practical tool for any QC or R&D lab requiring quick and easy testing of materials, regardless of application, at high shear rates.



Transparency Meter - Haze Gard-i

www.WorldofTest.com/transparency-meter-haze-gard-i

Transparent products can have a milky or fuzzy appearance dependent on their light scattering behavior. The haze-gard i quantifies the visual perception with objective measurement criteria:

- Total transmittance
- Transmission haze
- Clarity



Packaging Compression Tester

www.WorldofTest.com/packaging-compression-tester

ASTM D 642, ASTM D 4169, TAPPI T804, ISO 2872, ISO 12048, JIS Z0212

QT-PCT-500 is used to evaluate compressive resistance of small sized packages, boxes, and containers to analyze whether specific packing can successfully withstand the compressive forces they are subjected to during storage and distribution. The test gives a clear understanding of deformation under compressive force.



Synchronous Thermal Analyzer - QT-STA100

www.WorldofTest.com/synchronous-thermal-analyzer-qt-sta100

Synchronous Thermal Analyzer QT-STA100 combines TGA (Thermo gravimetric Analysis) with DSC (Differential Scanning Calorimeter), in which we can get the information of TG and DSC in synchrony using the same sample during the same operation.



Differential Scanning Calorimeter

www.WorldofTest.com/differential-scanning-calorimeter

The Differential Scanning Calorimeter - QT-DSC6 Series is a compact and low-cost thermal analysis instrument. Differential Scanning Calorimeter - QT-DSC6 Series have a vast number of industrial applications, particularly in the quality control of engineering thermoplastics.



LME Laboratory Mixing Extruder

www.WorldofTest.com/lme-laboratory-mixing-extruder

The LME Laboratory Mixing Extruder is a unique laboratory tool developed to evaluate the process ability of a variety of plastics and rubbers prior to production. From very fine powders to coarse materials, the LME will meet many extruding needs. The LME possesses a moveable header and dial gauge that allows for constant mixer adjustability. While in operation, the rotational shearing (mixing) is controlled by adjusting the distance between the end of the rotor and the inside header



Limiting Oxygen Index Chamber

www.WorldofTest.com/limiting-oxygen-index-chamber

ASTM D2863, ISO 4589, BS 2782 part 141

The Limiting Oxygen Index (LOI) fire test is perhaps the most economical and precise quality control test for combustible materials. Its ease of use together with high levels of precision has made this technique a primary characterization and quality control tool for the plastic materials and electric cable industries. It is often used in materials specifications and material/product data sheets and included in some US Mil Specs. The test assesses the minimum percentage of oxygen in the test atmosphere that is required to marginally support combustion.



Digital Elmendorf Tearing Tester – QT-DET

www.WorldofTest.com/elmendorf-tear-strength-tester

ASTM D1922, ASTM D1424, ASTM D689, ISO 13937-1, ISO 6383, ISO 1974, GB/T16578.2-2009, GB/T 455, TAPPI T414

QT-DET Digital Elmendorf Tearing Tester takes the Elmendorf method and is used to determinate tearing resistance property of films, sheets, flexible PVC, PVDC, waterproof films, woven materials, polypropylene, polyester, paper, cardboard, textile and non-woven, etc.



Leak Tester - QT-LT-V (Negative Pressure Method)

www.WorldofTest.com/leak-tester-qt-lt-v

ASTM D 3078

Leakage testing of pressurized packages is very important part of product manufacturing and preservation of product to maintaining its quality till consumption of product for industries which deal with food, beverages, pharmaceuticals, personal care etc.

Leakage Tester – QT-LT-V is used to test the hermetic sealing quality and performance of packaging bags, bottles, cans, etc.



Leakage and Seal Strength Tester - QT-LT-P

www.WorldofTest.com/leakage-and-seal-strength-tester-qt-lt-p

ASTM F1140, ASTM F2054, ISO 11607-1, ISO 11607-2

Qualitest Leakage Tester QT-LT-P tests the hermetic seal quality, strength, joint/disengaging force, performance, compression and burst resistance of packaging bags, bottles, flexible packages, cans covers etc., used in food industries, beverage, pharmaceuticals, and personal care and so on. These test methods provide rapid means of evaluating tendencies for package failure when the package is exposed to a pressure differential.



Opacity Meter

www.WorldofTest.com/opacity-meter

Quick, Easy Measurement of Relative Opacity for Film and Packaging Products

Ideal for the laboratory or plant floor, the Opacity Meter model RT-6000 is a simple to use, off line instrument that indicates relative opacity of plastic film, paper, laminates, printed packaging and other materials. With a single pass of the light source through your material, the system measures relative light transmission on a scale of 0 to 100 Opacity Units, representing perfectly transparent to purely opaque materials, respectively.



Ink Rub Tester

www.WorldofTest.com/ink-rub-tester

Rub resistance describes the ability of printed material to withstand marking, scuffing or smudge during handling in conversion, packaging, transportation, distribution and use. QT-IRT simulates a similar environment to test the rub resistance on printed materials.

It is used to analyze the life of label by creating actual environment of application to evaluate abrasion resistance of surface coating layer of printed material.

It simulates the actual working environment of product and helps to identify the quality and printing method to be used for printing of label based on application of product and its working environment.



Apparent / Bulk Density Tester

www.WorldofTest.com/apparent-bulk-density-tester

The Apparent Density Tester - Bulk Density Tester series testers are used to measure apparent density, bulk factor, and where applicable, the pourability of plastic materials such as molding powders. There are three methods according to ASTM D 1895 that are applicable to various forms of these materials that are commonly encountered - from powders and granules to large flakes and cut fibers. The apparatus consists of a measuring cup which is polished inside and a funnel.

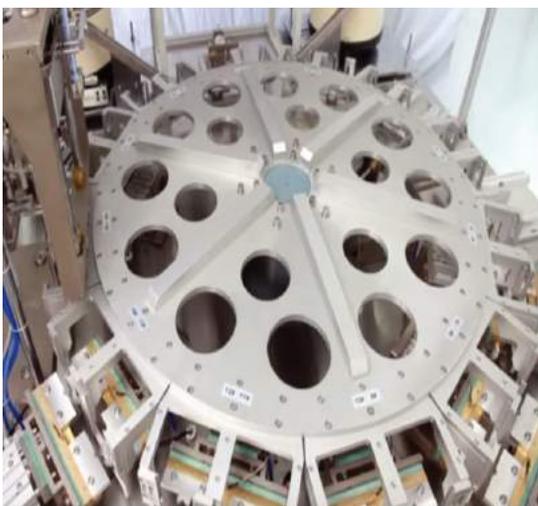


Spout Insert & Sealing Machine

www.WorldofTest.com/spout-insert-sealing-machine

Qualitest spout sealing machine is automatic PLC controlled machine specially designed for mass production of packages with spouts and heat sealed packages.

It is a fully automatic system consists of heat sealing system, spout input system, and bag input system, bag output system, and central control system mounted on single base frame from module. All systems are equipped with electronic sensors and relays to work cordially for efficient and quality manufacturing of packaging bags.



Key QualiBenefits

Qualitest is proud to retain a constantly growing roster of global customers who continue to benefit from our product offerings. Qualitest offers guarantees that make us stand out in the competitive testing equipment industry in offering the best price/quality ratio products, efficient support, and much more. These are a few key benefits that we continue to offer to our customers worldwide:



Low Price Guarantee



Qualitest is confident to offer competitive products at the best possible prices. That's why we offer 110% Low Price Guarantee to meet and beat any price for the same level product. We ensure to offer the best value for your investment.

High Level of Standards



Qualitest products are built to meet and exceed latest North American and global standard requirements

Efficient Logistics



Short delivery periods for standard products from our many convenient worldwide distribution centers. Our large volume of shipments helps us to offer the most competitive shipping rates worldwide.

#1 Source for Testing Technologies



Qualitest is recognized as a one stop source for complete quality control lab solutions, as we provide streamlined support for all of your testing requirements without the need of relying on too many sources.

Vendor of Choice for many Fortune 500 companies



North American and global Fortune 500 corporations continue to benefit from Qualitest range of products, as we ensure the highest security and assurance for their investment.

Centralized Service & Support Coordination



Managed through our central service dept. we offer efficient customer service support, direct or via our worldwide QualiService authorized network.