QUALITEST

ADVANCED TESTING TECHNOLOGIES

ADVANCED RUBBER AND ELASTOMER TESTING TECHNOLOGIES

WorldofTest.com

Qualitest

The Global Benchmark for Rubber & Elastomer Testing Technologies and Quality Control Instruments

Experience the Pinnacle of Precision, Quality, Cost-effectiveness in Materials Testing

For more than 26 years, Qualitest has been at the forefront of state-of-the-art materials testing and quality control instruments for the Rubber & Elastomer industries. Our advanced testing solutions, comprehensive product portfolio, and global footprint make us the preferred choice for leading organizations such as Apple, NASA, Intel, and Tesla.

All of our quality control equipment, testing instruments, and analytical devices exceed industry standards in every sector in which they're used—and come with the highest precision, proven reliability, and extended warranties.

With Qualitest, you can achieve the precision you need, reliably and cost-effectively.

RUBBER & ELASTOMER TESTING TECHNOLOGIES
OVERVIEW

In today's rapidly evolving industrial landscape, the quality and durability of materials are more critical than ever. Rubber and elastomer testing is essential across numerous sectors, from automotive and aerospace to medical devices, consumer goods, tire manufacturers, and O-ring companies. Ensuring these materials meet stringent performance and safety standards is paramount to maintaining product integrity, safety, and compliance.

Rubber and elastomers are subjected to a wide range of stresses and environmental conditions, necessitating rigorous testing to evaluate properties such as tensile strength, hardness, abrasion resistance, rebound resilience, and ozone resistance. Industry standards like ASTM, ISO, and DIN are widely recognized and adhered to in North America and global markets to ensure that products consistently meet high-quality benchmarks.

For over 26 years, Qualitest has been at the forefront of delivering advanced Rubber and Elastomer Testing Instruments to the North American rubber industry. Our comprehensive range of products includes Tensile Testers, Shore Durometer and IRHD Hardness Testers, Abrasion Testers, Rebound Resilience Testers, Ozone Chambers, MDR (Moving Die Rheometers), ODR (Oscillating Disc Rheometers), Densimeters, Clicker Presses and Specimen Dies, Brittleness Testers, and more. These instruments are designed to provide precise, reliable, and repeatable results, ensuring that your materials meet the demanding requirements of modern industry standards.

POPULAR TESTING METHODS AND THEIR BENEFITS FOR RUBBER TESTING LABS

Tensile Testing: Tensile testers measure the strength and elongation of rubber materials under tension. This test is crucial for evaluating how a material will perform when stretched, making it invaluable for applications like tire manufacturing, where durability and elasticity are key.

Abrasion Testing: Abrasion testers evaluate a material's resistance to wear and tear, providing insights into how long the material will last under repetitive friction or scraping. This is essential for products like conveyor belts, hoses, and tires, where surface wear can lead to premature failure.

Hardness Testing: Using Shore Durometers and IRHD Hardness Testers, labs can determine the hardness of rubber and elastomers, which is critical for applications where the material must resist indentation or deformation. This is especially important in O-ring manufacturing, where material hardness can directly impact sealing performance.

Rebound Resilience Testing: This method assesses the elasticity and energy return of rubber materials. High resilience is often desired in applications such as sports equipment and automotive parts, where materials must quickly return to their original shape after deformation.

Ozone Resistance Testing: Ozone chambers expose rubber materials to controlled ozone environments to evaluate their resistance to cracking and degradation. This is particularly important for outdoor applications where exposure to ozone can compromise material integrity over time.

Rheological Testing (MDR and ODR): Moving Die Rheometers (MDR) and Oscillating Disc Rheometers (ODR) measure the viscoelastic properties of rubber during curing. These tests are crucial for ensuring the correct processing and performance characteristics of rubber compounds, especially in the tire and automotive industries.



UNIVERSAL TESTING MACHINES

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A Universal Testing Machine (UTM) gives you the critical data you need to understand how your materials will perform in the real world. By precisely measuring properties like tensile strength, flexibility, compression, and tear resistance, our UTMs help you guarantee product quality, prevent failures, and innovate with confidence. Whether you're working with plastics, rubber, composites, or textiles, these machines provide clear, repeatable results for R&D and quality control. They push, pull, and bend materials under controlled conditions to verify strength, durability, and safety.

All our systems are engineered to meet major international standards (ASTM, ISO, etc.), ensuring your test data is reliable and universally accepted. Qualitest UTMs feature robust drive systems, high-precision sensors, and intuitive software, making it easy to get the accurate results you need to strengthen your brand and stay ahead of the competition.

Electromechanical Universal Testing Machine - **QE-Series**

The Single-Column Electromechanical Universal Testing Machines offer up to 10kN capacity and come in four different heights. They support closed-loop testing for various parameters across multiple tests, including tension and compression.

The QE-series can be fitted with grips, fixtures, and other accessories, making them suitable for testing diverse materials such as rubber, plastics, textiles, and metals.

Electro-Mechanical Single Column **QM-5 Series**

The QM-5 Series Electro-Mechanical Single Column Universal Testing Machine offers precise and reliable testing for materials such as rubber, plastic, metal, and composites under 5kN.

It supports various tests, including tensile, compression, bending, and peeling, with user-friendly software that provides real-time data and comprehensive analysis.

Available in models like QM-5, QM-5-EXT, QM-5-II, and QM-5-II-EXT, it conforms to ASTM E4, ASTM D76, ISO 7500-1, and DIN 5122 standards.

Universal Testing Machine - Tensile/Compression Tester **QM-20 Series**

The QM-20 Series are designed for precise tensile and compression testing across various materials with a 20kN capacity.

It features a low-maintenance servo drive system, a precision jog wheel, and high-speed signal feedback for accurate and reliable results.

Supports multiple tests, including tensile, compression, and bending, with user-friendly software for comprehensive data analysis.

Electro-Mechanical Dual Column - **QM-50 Series**

The QM-50 Series Dual Column Universal Testing Machine is built for precise tensile and compressive testing with a 50kN capacity.

It includes a spacious test area, extended stroke, and a maintenance-free servo drive for quiet, accurate operation.

The machine supports various tests and offers real-time data, optional standalone use, external signal integration, and a speed range of 0.0002 to 600mm/min.

UNIVERSAL TESTING MACHINES - EXTENSOMETER

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While a Universal Testing Machine measures force, an extensometer measures the material's true reaction to that force. By clamping directly onto the sample, it captures precise elongation and strain data, eliminating the guesswork and inaccuracies that come from measuring machine movement alone.

This level of precision is essential for determining critical properties like Modulus, yield strain, and elongation at break. Whether you're testing metals, plastics, or elastomers, our extensometers provide the clear, repeatable data needed to meet demanding ASTM and ISO standards.

Qualitest offers a full range of solutions, from easy-to-use clip-on models to advanced non-contact video extensometers. Engineered for seamless integration and reliable performance, they are the definitive tool for accurate strain measurement in any lab.

QM-L-EXT QM-Series **Long Extensometer**

A long extensometer is an essential accessory for accurately measuring material elongation, especially for materials with elongation greater than 20%. It is typically used for testing dumbbell-shaped specimens made from rubber, plastic, PE, fabric, and webbing materials.

One of its key advantages is its seamless integration with Qualitest's universal testing machines, enabling automatic detection of test piece deformation during the testing process. This functionality enhances measurement precision and efficiency, ensuring reliable and consistent results.

QM-S-EXT QM-Series **Clip-On Extensometer**

The Clip-On Extensometer is designed for testing rigid plastic, metal, and materials with elongation below 50%.

It features a precise displacement sensor and a compact structure, offering a resolution of up to 0.5μm. For tests with a maximum load under 20kN, the extensometer can remain attached to the specimen until fracture.

Customized specifications are available when gauge length or elongation exceeds standard parameters.

Grip and **Fixtures**

Qualitest offers an extensive range of advanced test fixtures and grips, accessories, and adapters for Universal Testing Machines and Tensile/Compression Testers.

These include Compression Platen, Bending Fixture, Shear Grip, Eccentric Roller, Pincer Grip, Screw Grip, Ribbon Grip, Wedge Grip, Button Head Grip, Thread Head Grip, Rope Grip, Pneumatic Grip, Hydraulic Grip, Peeling Grip, and various Adapters.

These components are essential for conducting a wide array of material tests, ensuring accurate and reliable results.

ABRASION TESTERS

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Abrasion testers measure the wear resistance of materials like rubber and plastics under controlled conditions, simulating real-world friction to provide accurate durability data. Conforming to international standards (ASTM, ISO, DIN), they yield consistent results across various industries, essential for assessing surface quality and reliability.

Qualitest offers a range of abrasion testing instruments, including models for specialized applications, featuring precision mechanics and flexible configurations to support product development and quality assurance.

DIN Abrasion Tester - **DIN Abrader**

The DIN Abrasion Tester evaluates abrasion resistance for vulcanized rubber, plastic, and other materials according to ASTM D5963, ISO 4649, and DIN 53516 standards.

It measures volume loss in cylindrical specimens using abrasive paper on a rotating drum, featuring user-friendly setup, quick weight adjustment, automatic sample wear detection, and precise drum speed control.

Akron Abrasion Tester

The Akron Abrasion Tester assesses the abrasion resistance of vulcanized rubber and elastomers using a tilted grinding wheel to apply loads at an angle.

It measures material loss after a set number of cycles, simulating real-world conditions for valuable insights into material development and product design improvement.

NBS Abrader - Abrasion Tester

The NBS Abrader tests the abrasion resistance of rubber or similar compounds used in footwear soles and heels, conforming to ASTM D1630 standards.

It features a memory function for setting test numbers, maintaining records even during power failures. The tester can connect to a vacuum cleaner for easy cleanup.

Rubber Hose Abrasion Tester

The Rubber Hose Abrasion Tester evaluates the abrasion resistance of rubber hose covers using a high-speed steel grinding jig that simulates wear conditions.

It operates at 1.25 Hz (75 cycles per minute) with a 100 mm reciprocating stroke. The adjustable mandrel accommodates various specimen sizes, and a built-in LCD counter tracks up to 99,999,999 cycles.

Rotary Taber-type Abrasion Tester

The Rotary Taber-type Abrasion Tester assesses the abrasion resistance of materials like cloth, paper, paints, plywood, leather, and rubber by measuring material loss under specified loads.

Features with adjustable loads, 60±5 ~ 72±5 rpm, and an LCD counter, it conforms to ASTM D1044, ASTM D3884, DIN 52347, DIN 53109, and ISO 5470-1 standards.

Trim Machine - QT-7012-T1

The QT-7012-T1 Trim Machine is designed for trimming abrasive wheels in Taber Abrasion Resistance Testers.

It uses a diamond dressing stick for shaping, optimizing performance, and extending the wheels' service life while ensuring consistent test results.

DIN Abrasion Tester
Reference Rubber Compound Sheet

The DIN Abrasion Rubber Reference Compound Sheet (ISO 4649, Appendix B.2) is designed for use with DIN abrasion testers.

Supplied as Standard Reference Compound No. 1, it comes in an 8 × 181 × 181 mm sheet containing 101 round test pieces (Ø16 mm). Each sheet is certified to ensure reliable, standardized testing and consistent results in accordance with ISO 4649.

DUROMETER - SHORE IRHD HARDNESS TESTER RANGE

When it comes to rubber, plastics, and elastomers, hardness testing is one of the most reliable ways to understand how a material will perform in real-world use. A durometer makes this process simple—by measuring resistance to indentation, it gives manufacturers a clear picture of durability, flexibility, and product life. These insights are critical for industries that demand consistency and safety, from automotive parts to consumer goods.

The most trusted methods are Shore and IRHD hardness testing. They've become global benchmarks because they provide consistent, repeatable results that align with ASTM and ISO standards. Using these methods allows companies to control quality, adjust formulations with confidence, and guarantee that every batch of material meets strict requirements.

Digital Shore Durometer
Hardness Tester -
Drive Series

The Digital Shore Durometer – Drive Series provides high precision hardness testing for rubber and elastomer materials, with integrated temperature and humidity sensors.

Offering both manual and support-assisted operation, it functions as a stand-alone device or connects to HardnessCheck software for automatic data storage.

Available in Shore A, Shore D, Shore OO, and Shore AO scales.

Automatic Shore IRHD
Hardness Tester Durometer -
DRIVE Series

The Automatic Shore IRHD Hardness Tester Durometer – DRIVE Series provides precise hardness testing for polymers and elastomers.

They features interchangeable measuring heads, motor-controlled displacement, and automatic specimen rotation.

Compatible with standard PCs and USB, it offers efficient use with multi-language support and reliable calibration services for accurate results.

Shore Durometer
HD-3000 Series

The Shore Durometer HD-3000 Series provides precision hardness measurement solutions. The HD-3000 model has a clear dial and meets ASTM and ISO standards for accuracy and cost efficiency.

The HD-3000L includes Slim Probe options for difficult contours, while the OS-2 Operating Stand ensures consistent measurements by minimizing errors from load variations. The OS-2-OO model is tailored for Durometer OO requirements.

DUROMETER - SHORE IRHD HARDNESS TESTER RANGE

The wide variety of materials, from soft gels to hard plastics, required different scales to get a useful reading. For this reason, a variety of durometer scales were developed. The Shore A scale, for instance, uses a blunter point and a softer spring, making it ideal for materials like shoe soles and gaskets. The Shore D scale, on the other hand, uses a sharper point and a much stronger spring to accurately measure harder materials like PVC pipe and bowling balls. This variety ensures that every material can be tested on the right scale for its specific application.

Through our collaboration with Gibitre, we offer a complete line of Shore and IRHD durometers, from handheld testers for quick checks to advanced automated systems for laboratory analysis. Built with precision sensors and intuitive software, our instruments make hardness testing efficient and dependable—helping manufacturers save time, reduce errors, and maintain the highest levels of quality.

IRHD Hardness Testers

Qualitest provides Standard and Micro IRHD Hardness Testers for precise measurement of rubber, elastomers, and soft polymers using a non-destructive indentation method that complies with ISO 48 and ASTM D1415.

Standard models suit flat samples and thicker components, while Micro models are ideal for thin parts or O-rings.

Applications include quality control, testing seals and gaskets, and R&D of new rubber formulations.

Automatic IRHD/Shore Hardness Tester - Laser Revolution

The Laser Revolution Hardness Tester is an automatic hardness tester designed for O-rings, technical components, and standard samples.

Supporting Shore and IRHD units, it also conform to ASTM and ISO standard requirements.

This instrument is equipped with interchangeable units, a laser centering device, and rotating sample holder, it ensures precise, repeatable measurements without operator influence.

Durometer Calibration Device

The Durometer Calibration Device verifies the forces applied by durometers in line with ISO 18898 and other international standards.

Built with a stable base, adjustable arm, durometer support, and electronic balance, it ensures accurate calibration across Shore and IRHD types.

Its durable design and precise adjustment mechanism provide reliable performance for both laboratory and industrial use.

REBOUND RESILIENCE TESTING

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A rebound resilience tester tells you exactly how much energy a material can return after it's deformed. This is a crucial measure for rubber and other elastic materials, directly impacting durability and performance. It's the reason a sneaker's sole feels responsive or a car tire absorbs road shock.

Our testers meet international standards like ASTM and ISO, giving you consistent and comparable results across the board. Industries from automotive to consumer goods rely on this test to ensure their products perform as expected.

Qualitest provides a full line of rebound resilience testers, including vertical, pendulum, and advanced digital models. Each instrument is built for precise measurement and reliable operation, offering accurate insights into material elasticity for both laboratory and industrial use.

Rebound Resilience Tester **QualiRebound-GB**

The QualiRebound-GB evaluates the resilience of elastomers within a hardness range of 30 to 85 IRHD points conforming to ASTM D7121 and ISO 4662 standards.

It measures the energy returned to the instrument's hammer after impact, offering insights into the elastomer's dynamic properties.

The process determines the hammer's rebound angle and provides a direct reading of the resilience value.

Vertical Rebound Resilience Tester – Resiliometer **QualiRebound-V1**

The QualiRebound-V1 Resiliometer precisely measures the vertical rebound resilience of rubber materials, conforming to ASTM D2632 standards.

This tester drops a plunger from a specific height onto the material, recording the rebound height to determine the material's impact resilience.

Ideal for industries like automotive and construction, it ensures reliable quality control and material evaluation across various applications.

Rebound Resilience Elasticity Tester - **QualiRebound-RDA**

The QualiRebound-RDA Rebound Resilience Elasticity Tester measures elastomers' rebound resilience using a pendulum method and pneumatic clamping for accuracy.

It's suitable for industries like rubber, plastics, and automotive, ensuring reliable material assessments.

The tester has a touchscreen interface, standardized procedures, and is user-friendly, enhancing quality assurance and product design.

Rebound Resilience Elasticity Tester - **QualiRebound-A**

The QualiRebound-A Rebound Resilience Elasticity Tester assesses the impact resistance of elastic and flexible materials.

It offers insights into material differences and aging effects, aiding quality research and purchasing.

Key features include a durable impact head, an arc-shaped dial for results (0% to 100%), a versatile sample clamp, and an adjustable shaft for precise testing, making it a reliable tool for evaluating material resilience.

OZONE RESISTANCE TESTING

Ozone resistance testers simulate ozone exposure to evaluate the durability and aging behavior of rubber and elastomeric materials. Since ozone can cause cracking, hardening, and deterioration even at low concentrations, testing is critical for predicting product performance and ensuring long-term reliability.

These instruments conform to international standards such as ASTM, ISO, and DIN, providing accurate and repeatable results across industries including automotive, aerospace, construction, and consumer goods. By replicating real-world environmental conditions, they allow manufacturers to improve formulations and validate protective measures against ozone damage.

Qualitest offers a complete range of ozone test chambers, from standard and high-capacity models to UV-based systems for accelerated testing. With precise environmental control, automated data recording, and advanced safety features, these testers provide the data needed to optimize formulations and verify a material's resistance to environmental aging.

Ozone Tester – Ozone Chamber

The Ozone Tester – Ozone Chamber simulates and intensifies ozone conditions to assess rubber's resistance to ozone-induced aging. It quickly identifies rubber's susceptibility to cracking and the effectiveness of anti-ozone agents, improving product durability.

This chamber is versatile, ideal for testing vulcanized rubber, thermoplastic rubber, and cable insulation. It's widely used across industries like rubber and plastics, automotive, and manufacturing to ensure products meet quality standards by exposing materials to controlled ozone environments and evaluating their aging resistance.

Ozone Test Chamber 300L

The Ozone Test Chamber 300L is designed to assess the aging resistance of rubber products by simulating accelerated ozone exposure, allowing for a detailed comparison of rubber's susceptibility to ozone.

It features independent Aging Zones controlled by a dedicated system, electrical digital control for dynamic operation, and stable ozone concentration data using a photometer.

The chamber effectively regulates ozone concentration, temperature, and humidity to ensure precise testing. Its large capacity testing area with a modular design accommodates various sample sizes, while the leak-free, ozone-free exhaust system ensures safety and compliance with environmental regulations.

Ozone Test UV for Testing Rubber Deterioration

The Ozone Test Chamber – OzoneTest UV measures rubber's resistance to cracking under static or dynamic tensile strain, conforms to ASTM, ISO, DIN, and other international standards. It measures the resistance of rubber samples to cracking when subjected to static or dynamic tensile strain.

It offers automated control of ozone concentration, temperature, and airflow, with a UV-absorption ozone detector for accurate results. Ozone generation and elimination occur within a closed circuit, ensuring no need for exhaust evacuation.

The system supports customizable test conditions and automatic calibration, with data visualization and storage capabilities.

RHEOLOGICAL TESTING (MDR AND ODR)

Rheological testing evaluates how rubber compounds flow and cure, providing critical data on viscosity, elasticity, and crosslinking behavior. The most common instruments for this are Moving Die Rheometers (MDR) and Oscillating Disk Rheometers (ODR).

Both conform to ASTM and ISO standards, measuring key factors like scorch time, cure time, and torque. These parameters are vital for controlling the quality of rubber during its transformation.

Another partnership with Gibitre, Qualitest provides a range of reliable rheometers and viscometers. Our instruments feature precise controls and user-friendly software, ensuring accurate, repeatable results for optimize the formulations and product integrity.

Moving Die Rheometer - **MDR Rheocheck MD Drive**

The MDR Moving Die Rheometer – Rheocheck MD Drive evaluates the cure characteristics of rubber compounds per ASTM D 5289 and ISO 6502-3 standards.

It measures vulcanization by applying repetitive strain and recording changes in mechanical properties and stiffness over time at a specified temperature, offering insights into the curing process.

Mooney Viscometer - **Mooneycheck Drive**

The Mooney Viscometer – Mooneycheck Drive measures Mooney viscosity, pre-curing (scorch), and stress relaxation in rubbers, complying with ASTM D 1646 and ISO standards for accuracy.

The testing involves measuring the torque required to rotate a metal disc in a rubber-filled chamber at 2 rpm under controlled temperature and pressure, quantifying resistance as Mooney viscosity to assess material processing characteristics and quality.

Oscillating Disk Rheometer - ODR Rheocheck OD Drive

The ODR Oscillating Disk Rheometer – Rheocheck OD Drive evaluates rubber compound curing characteristics according to ASTM D2084 and ISO 6502-2 standards.

It measures vulcanization by applying cyclic strain to a test piece while recording stiffness over time at a set temperature, offering insights into mechanical changes during curing.

Moving Die Rheometer - **MDR-3000 Series**

The MDR-3000 Series Moving Die Rheometer measures viscosity, elasticity, hysteresis loss, and curing rate during rubber vulcanization.

It features advanced DSP technology and a built-in DFT calculation formula, with models including MDR-3000AU, MDR-3000FAU, MDR-3000U, and MDR-3000FU.

SPECIMEN PREPARATION DEVICES FOR RHEOMETERS AND VISCOMETERS

Accurate rheology and viscosity testing begins with precise specimen preparation. To ensure reliable and repeatable results, samples must be uniform in size, volume, and shape before entering rheometers or viscometers. Poorly prepared specimens can lead to inconsistent data, wasted material, and added testing time.

Qualitest offers a full range of specimen preparation devices designed to simplify and standardize this process. From constant volume cutters for MDR, ODR, and Mooney Viscometers, to specialized cutting machines and specimen punches, these tools guarantee consistency across tests.

Built with robust designs and compliant with ASTM and ISO standards, our preparation devices help laboratories improve efficiency, accuracy, and repeatability. They are the essential first step for dependable rheological and viscosity analysis.

Constant Volume Specimen Die Cutter
For Cutting MDR ODR Rheometer and Rubber Samples

The Constant Volume Specimen Die Cutter creates uniform-volume samples for MDR Rheometer, ODR Rheometer, and Mooney Viscometer tests with polymer or green rubber.

It meets ASTM and ISO standards, featuring a durable build and dual-piston mechanism for consistent sampling, even with viscous compounds. This uniformity enhances test consistency, ensures accurate chamber filling, and improves repeatability.

Constant Volume Sample Cutter
for Mooney Viscometer

The Constant Volume Specimen Die Cutter creates uniform-volume samples for MDR Rheometer, ODR Rheometer, and Mooney Viscometer tests with polymer or green rubber.

It meets ASTM and ISO standards, featuring a durable build and dual-piston mechanism for consistent sampling, even with viscous compounds. This uniformity enhances test consistency, ensures accurate chamber filling, and improves repeatability.

Rheo-SCM Specimen
Cutting Machine

The Rheo-SCM Specimen Cutting Machine is designed for cutting specimens for the MDR-3000 Series Rheometer.

Driven by a cylinder, it is tailored for cutting rubber specimens used in curing tests. The machine features a solid frame, user-friendly operation, and high cutting capacity. The cutter size is Ø35mm or Ø50mm (optional), with a stroke of 45mm, and operates with an air source of 0.3~0.6 Mpa.

Mooney Specimen
Punch

The Mooney Specimen Punch is designed for Mooney Viscometer specimens, specifically to drill holes in the center.

It uses mechanical force for precise punching, standardizing sample preparation for Mooney tests.

The punch is tailored to Mooney specimens, ensuring accurate and reliable samples.

FLAMMABILITY TESTER

Flammability testers are used to evaluate the fire resistance of rubber, plastics, textiles, and other materials under controlled conditions. These instruments simulate ignition sources and flame exposure to measure ignition time, flame spread, and self-extinguishing behavior—critical factors for safety and regulatory compliance.

Conforming to international standards such as ASTM, ISO, UL, and DIN, flammability testing ensures that materials meet strict fire safety requirements across industries including automotive, electronics, aerospace, and consumer products.

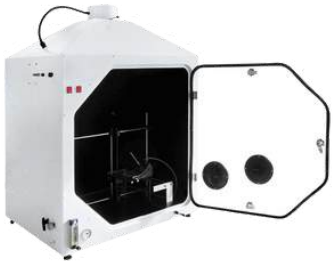
Qualitest offers a full range of flammability testing equipment, from general-purpose chambers to specialized systems for automotive interiors and electrical materials. With precise flame control, advanced safety features, and reliable measurement, these testers deliver the precise measurements required to optimize material formulations and satisfy compliance standards.

Flammability Tester for Rubber and Plastics

The Flammability Tester for Rubber and Plastics is designed to assess the flame resistance of rubber and plastic materials as per UL 94 standards conforms to ASTM, ISO, and other international standards. It features a stainless steel cabinet with a tempered glass viewing window, a Bunsen burner, and a precise gas flow meter.

The tester supports versatile flame angle customization, ensuring accurate sample positioning and measurement. Equipped with advanced safety features, it effectively manages combustion fumes during testing. Additionally, it includes a gas flow adjustment system with manometers and fluxometers for precise gas flow control.

UL 94 Flammability Chamber



The UL 94 Flammability Chamber, also known as the Horizontal Vertical Flame Chamber, is specifically designed for testing the flammability of plastic materials used in electrical devices and appliances. It complies with several international standards, including ASTM, ISO, and IEC standards.

This compact chamber, with a total size of less than 1 cubic meter, is capable of performing all horizontal and vertical flame tests (50W/500W). It is equipped with a mass flow meter for precise methane flow control, motorized holder stand for vertically shrinking materials, and a user-friendly multi-channel timing device that is intuitive and easy to operate.

Horizontal Flammability Tester for Automotive Interior

The Horizontal Flammability Tester for Automotive Interior is designed to assess the flammability of materials used in automotive interior compartments following exposure to small flames.

Features Bunsen burner with a diameter of 9.5 mm and removable horizontal sample support with steel wires, enabling precise flame management.

It complies with various standards including ASTM FMVSS 302, ISO 3795, DIN 75200, FAR Part 25 F1, and others. The tester ensures that materials meet safety requirements for automotive interiors by evaluating their resistance to ignition and flame spread under controlled conditions.

COMPRESSION SET

Compression Set Test Fixture

The Compression Set Test Fixture is designed to evaluate how rubber and elastomeric materials recover after long-term compression at specified temperatures.

By securing specimens between parallel plates, it measures permanent deformation as a percentage, providing reliable data on material durability and sealing performance.

Compression Set Test Device

The QualiCST-815 evaluates how well rubber retains its elasticity after prolonged compression at specified strain and temperature levels. Conforming to ISO 815, ASTM D395, and DIN 53 517 standards, it provides accurate measurement of material performance under real-world conditions.

Ideal for quality control and research, it ensures reliable assessment of rubber durability across different hardness ranges.

SPECIMEN CUTTING DIES / MOLDS

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Specimen **Cutting Dies / Molds**

Specimen Dies and Molds are essential tools for preparing accurate test specimens that meet international testing standards such as ASTM, ISO, DIN, and JIS. Manufactured from hardened P20 tool steel, these dies are ground, polished, and optionally chrome-plated with Teflon coating to ensure durability and precision. The cutting edges are wire-cut from solid tool steel and designed for re-sharpening, allowing long-term, cost-effective use while maintaining high accuracy.

Each die ensures uniform specimen thickness by keeping the inside surface perpendicular to the cutting edge. Available in single- or multi-cavity designs, they can be configured with one to sixteen cavities depending on testing requirements. Dies are supplied in padded carrying cases and come with a full inspection report and certificate of compliance.

Specimen Dies are available for a wide range of standard tests, including:

- ASTM D-412: Tensile sample cutting dies
- ASTM D-638: Tensile dies Type I–V
- ASTM D-624: Tear sample cutting dies (including slit types)
- ASTM D-1708: Microtensile dies
- ASTM D-1938, D-746, D-1004, D-1822-S: Specialized test specimen molds
- JIS K-6301 and DIN 53504: Standard dies for international compliance

Accessories such as mallet handles, backplates, adaptors, and rubber-filled options are also available to support various specimen preparation methods. In addition, rotary type cutters are designed for drill press use, while tensile and tear dies can be operated manually with a mallet or in clicker presses.

Qualitest offers a wide range of custom and standard molds, including compression set molds, adhesion specimen molds, spiral flow molds, abrasion resistance molds, and impact test molds. This comprehensive selection makes it possible to prepare specimens for almost every type of material testing.

CLICKER PRESSES / SPLITTING MACHINE

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Clicker presses are versatile machines used for cutting rubber, leather, plastics, textiles, and similar materials into precise shapes and test specimens. They are widely used in laboratories and production environments to prepare samples for testing or to carry out light industrial cutting tasks. These presses range from manual and pneumatic models to hydraulic swing-arm systems, offering options that balance speed, accuracy, and cost-effectiveness. Conforming to ASTM, ISO, DIN, and JIS standards, they ensure consistent specimen preparation and reliable results.

Qualitest provides a complete range of clicker presses and certified cutting dies designed for durability, ease of use, and precision. From small-scale laboratory applications to high-productivity operations, these machines deliver efficient solutions for consistent and accurate sample cutting.

Manual Clicker Press

The Manual Clicker Press is a versatile tool for standalone cutting tasks and works alongside hydraulic presses for smaller jobs. It features a single lever rotation for fast operation at a lower cost than hydraulic presses.

Ideal for cutting various materials, it can handle rubber specimens, leather, laboratory samples, belts, embroidery badges, rubber stamps, surfboard fins, key fobs, gaskets, and rubber washers.

C-Frame Type Clicker Presses – QC700 and QC1500 Series Pneumatic Air Operated

The QC700 and QC1500 C-Frame type Pneumatic Clicker Presses, with capacities of 7 and 15 tons, are ideal for die-cutting applications.

These air-operated machines are designed for cutting rubber, elastomers, leather, fabric, gasket materials, plastic, textiles, and more using Steel Rule Dies, Forged Dies, or Clicker Dies. Engineered for precision, these presses offer robust performance for a variety of industrial applications.

Basic Sample Clicker Press

The Basic Sample Clicker Press is designed for cutting samples made of rubber, leather, and paper according to ASTM, ISO, DIN, and JIS standards.

It offers up to 2 tons of cutting pressure and features a compact size of 30x65x67 cm, making it a practical choice for various applications.

Weighing 47 kg, this manual press is easy to operate and ideal for laboratories and small-scale production environments.

Hydraulic Swing Arm Clicker Presses

The QTSE Series Hydraulic Swing Arm Clicker Presses are widely used die-cutting machines, recognized for their reliability, productivity, and energy efficiency. These presses are ideal for cutting small dies with excellent visibility and ease of use. The swing beam is easily adjustable, allowing operators to quickly collect and reposition materials for the next cut. Commonly used for leather, footwear, gaskets, foam, rubber, plastics, and textiles, the QTSE Series offers advanced controls for optimal performance.

Auto-Pneumatic Clicker Press

The Auto-Pneumatic Clicker Press is an efficient and cost-effective solution for cutting rubber, plastics, and leather specimens in testing laboratories. Requiring only 5 bars of air pressure (73 psi) to operate, this press is available in 3 or 5-ton capacities, suitable for cutting samples up to 10 or 15 mm thick.

With a simple operation, safety features, and an excellent quality-performance/price ratio, this compact press is widely used in the rubber and plastics industry.

Laboratory Cutting / Splitting Machine

The Laboratory Cutting/Splitting Machine is designed for precise rubber and thermoplastic sample preparation, allowing thickness adjustments from 0.5 to 8 mm.

Complying with ASTM, ISO, and IEC standards, it features a 300 mm working width, motor-driven steel feed rollers, and a digital thickness display accurate to 0.01 mm for consistent results.

DENSIMETERS - SPECIFIC GRAVITY TESTERS

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Densimeters, also known as specific gravity testers, are used to measure the density and specific gravity of solids, liquids, and powders with high precision. These instruments provide fast, accurate results that are essential for quality control, material identification, and production monitoring.

Conforming to ASTM, ISO, and JIS standards, densimeters ensure reliable testing across industries such as rubber, plastics, chemicals, and composites. They are widely applied in both research laboratories and production environments.

Qualitest offers a broad range of densimeters with advanced sensors, chemical-resistant vessels, and optional liquid density kits. With rapid measurement times, easy operation, and data connectivity, these instruments deliver dependable results for diverse testing applications.

Densimeter — EW-300SG

The Densimeter EW-300SG is an ideal solution for quick and accurate density and volume measurements in production environments.

With a rapid testing time of just 10 seconds, this densimeter is designed for high-efficiency operations, especially for solid samples.

The instrument boasts a resolution of 0.01g/cm³ and can handle samples up to 300g, making it perfect for a wide range of applications.

It features an improved chemical-resistant Styrol weighing platform, is compatible with a comparator mode for enhanced precision, and connects easily to a PC via an RS232 interface for efficient data management.

Densimeter — MD-300S

The Densimeter MD-300S is an advanced density testing instrument with a high resolution of 0.001g/cm³, suitable for both solid and liquid samples, and offers precise measurements within 10 seconds.

It includes features such as chemical-resistant Styrol technology and comparator mode for for smoother operations and enhanced accuracy. An optional liquid mode kit is available for liquid density measurements.

Densimeter — MDS-300

The Densimeter MDS-300 provides high-precision density measurement for solids, liquids, and powders with a resolution of 0.001g/cm³.

It features advanced auto-weighing and easy measurement of absorbent samples, pellets, and floating objects. The powder mode adds a reference value of 0.0001g/cm³, with an optional kit, the liquid mode ensures easy measurement of compensated liquid density.

Densimeter — MDS-3000

The Densimeter MDS-3000 offers high-capacity density measurement for solids, liquids, and powders, handling up to 3kg of samples. This model allows for wide measuring without cutting and provides average density values for larger samples.

It includes auto-weighing functionality for improved efficiency and accuracy. Optional liquid density measurement can be achieved using an additional kit.

Densimeter — SID-220W

The Electronic Densimeter SID-220W is a top-tier model featuring 0.1mg resolution and advanced functions for solid, liquid, and powder measurements.

It offers quick measurement times ranging from 3 to 30 seconds and comes with an auto-enter mode for real-time results.

Equipped with a liquid measurement mode and customizable sensor kits, the SID-220W ensures versatile and accurate density measurements.

DEMATTIA FATIGUE TESTER

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DeMattia Fatigue Testers evaluate the durability of rubber and elastomers under constant flexing and tension. This is the key to understanding how a material will hold up over time. By measuring crack initiation and growth, these instruments provide the data to predict a product's long-term performance.

Conforming to ASTM and ISO standards, DeMattia testers deliver precise and repeatable results across industries such as automotive, aerospace, footwear, and consumer goods. They are essential for manufacturers seeking to improve formulations, validate quality, and ensure compliance with international testing requirements.

Through collaboration with Gibitre, Qualitest offers advanced DeMattia Fatigue Testers with customizable test parameters, high-capacity sample handling, and optional AI-based video monitoring. These systems combine reliability and accuracy with modern features for real-time analysis, making them ideal for both laboratory research and industrial quality control.

DeMattia Fatigue Tester - Standard Model

The DeMattia Fatigue Tester offers advanced control and regulation capabilities to tailor test cycles according to specific sample types and testing methods.

Users can adjust the frequency between 60 to 300 revolutions per minute (rpm) and set the stroke length from 0 to 60 millimeters. The tester also allows defining the grip distance, which can be extended up to 100 mm.

Additionally, users can program the number of test cycles before the machine automatically stops, ensuring accurate fatigue testing. The instrument enhances efficiency by allowing up to 16 samples to be tested concurrently.

DeMattia Fatigue Tester - Plus

The DeMattia Fatigue Tester - Plus is engineered to comply with international fatigue standards for evaluating the endurance of vulcanized rubber subjected to repeated deformations. This tester is capable of performing two essential tests: flex cracking and crack growth tests, as well as tension fatigue tests.

This instrument allows users to easily adjust the test frequency, from 60 to 300 rpm, set the stroke from 0 to 60 mm, and adjust the grip separation distance up to 100 mm.

It also provides the ability to preset the number of cycles, with a maximum of up to 1,000,000 cycles, enabling automatic cessation of the test.

DeMattia Fatigue Tester - AI Camera

The DeMattia Fatigue Tester - AI Camera enhances the Plus model with advanced video monitoring and environmental control.

It includes six high-resolution cameras for real-time specimen monitoring, complemented by LED lighting for consistent image quality.

The integrated environmental chamber allows for temperature adjustments from -40°C to 200°C, enabling inspections without chamber access.

These features make the AI Camera version ideal for users needing greater accuracy, control, and real-time data in fatigue testing.

CARBON BLACK TESTER

Carbon black plays a major role in the strength, durability, and performance of rubber and plastics. From tires to seals and industrial components, the way carbon black is measured and dispersed directly impacts product quality and consistency.

Our Carbon Black Testing line covers every step of the process. The Carbon Black Content Tester accurately determines carbon black percentage in polymers, while the Dispersion Tester evaluates how evenly it is distributed in rubber compounds. To support accurate analysis, the Sample Cutter prepares clean, precise specimens for testing without distortion.

By combining these systems, laboratories and manufacturers gain a complete solution for quality control and R&D. Built to comply with ASTM, ISO, and IEC standards, these instruments deliver dependable results that help improve formulations, optimize production, and maintain confidence in final products.

Carbon Black Content Tester

Carbon Black Content tester QualiCBCT-200 is designed to determine the amount of carbon black present in materials such as polyethylene, polypropylene, polybutylene plastics, as well as cable and optical cable insulation and sheath materials, along with rubber.

It adheres to national standards like IEC60811-4-1:2004, and others. Samples are subjected to high-temperature pyrolysis in a nitrogen environment, and the carbon black content is determined by analyzing the weight of the pyrolyzed sample.

Carbon Black Dispersion Tester – Carbon Black Analyzer

The QT-CBD Series Carbon Black Dispersion Tester from Qualitest evaluates carbon black dispersion in mixing compounds using precise analysis techniques.

It assesses surface characteristics of cut rubber, aiding in production monitoring, quality inspection, and product development.

With features like real-time monitoring and automatic scoring, it enhances production efficiency and product quality, making it essential for rubber manufacturing and materials science research.

Carbon Black Analyzer Sample Cutter

The Carbon Black Analyzer Sample Cutter QT-CBD-SC is a precision machine for cutting samples for carbon black analysis. It uses frozen specimen technology for fast, accurate cuts without burrs, ensuring reliable test samples.

Features include a tensile design, clamps for stability, and a refrigeration system, enhancing efficiency and consistency in preparing samples. Tailored for carbon black analyzers, it improves production efficiency and accuracy in analysis experiments.

Tire Plunger Tester

The Tire Plunger Tester assesses tire strength, elasticity, and performance, with a capacity of 10 tons and adjustable speeds of 0–299 mm/min.

It offers high-resolution load accuracy of ±0.3% for various tests, including plunger tests and footprint analysis.

Features include a servo-driven system, digital load detection, and real-time computer analysis, meeting ASTM F414, ASTM F870, and international standards.

Visual Inspection and AOI - QualiAOI-I

The QualiAOI-I Visual Inspection and AOI system delivers fast, high-precision measurement of multiple workpiece features within seconds.

Powered by AI-driven auto-focus and recognition, it eliminates operator error and ensures consistent results. With SPC reporting, MES/ERP connectivity, and barcode integration, it streamlines quality control and boosts production efficiency.

Optional modules for thickness and height analysis further expand its capability, meeting diverse high-accuracy inspection needs.

Mechanical Stability Tester

The QT-MST Mechanical Stability Tester evaluates the mechanical stability of natural rubber latex concentrate, ensuring consistency and quality in both raw and prevulcanized latex.

Conforming to ISO 35, it provides reliable assessment of homogeneity, stability, and certified property values, making it an essential tool for latex characterization and quality control.

Flexometer

The Flexometer, also known as the Goodrich Flexometer, measures heat build-up, blow-out resistance, and thermal set in rubber under dynamic compressive strain.

Conforming to ASTM D623 and ISO 4666 standards, it evaluates fatigue life, compression set, and durability of vulcanized rubber—making it essential for testing tires, bearings, supports, and other rubber components.

Karl Fischer Titrators & Moisture Analyzers

The Karl Fischer volumetric method effectively measures moisture content in various samples. Instruments feature automatic reagent balance, high-precision platinum electrodes, and touch functionality for reliable and accurate measurements.

They also include anti-corrosion designs and precise metering pumps for durability. Each product meets high reliability standards for use in scientific research and industrial applications.

Halogen Moisture Analyzers

The Halogen Moisture Analyzers deliver precise moisture measurements for various materials, including granules and non-volatile liquids. They utilize halogen heating for rapid, uniform heating and have a user-friendly design, making them ideal for industries requiring accurate moisture control.

Available models include the QMA-E, QMA-EA, and QMA-S Series, ensuring consistent, high-quality measurements for informed decision-making and quality standards.

Automatic TR Tester - Brittleness Point Tester

The Automatic TR Tester – Brittleness Point Tester is designed for low-temperature testing to evaluate the crystallization effects and viscoelastic properties of rubber and similar materials.

It includes a 5-liter stainless steel bath, precise temperature control with a high-resolution controller, and safety features like an independent overheating controller. Cooling can be achieved through nitrogen tanks or refrigeration units, automatically managed based on test parameters.

Stress Relaxation Tester - Creep Tester

The Stress Relaxation Tester, or Creep Tester, measures material deformation over time under a constant load and temperature.

It's crucial for materials that must maintain integrity under specific conditions, featuring a touch interface, wide temperature range, precise force measurement, and various test modes, with models available for low-temperature testing.

Brittleness Temperature Tester - **QT-BPT**

The QT-BPT measures the temperature at which rubber, plastics, and elastomers fail brittlely under specific impact conditions. Following ASTM D746 and ISO 812, samples are placed in a thermostatic bath and tested at temperatures from −70°C to +20°C using dry ice and Nitrogen.

Specimens are submerged for 3 minutes (rubber) or 2.5 minutes (other materials) before being struck by a hammer dart at 2 ± 0.2 m/s to determine the lowest failure temperature. Post-test, samples are inspected for cracks and fragments.

Block Oven – Aging Oven

The Block Oven – Aging Oven enables precise thermal regulation for aging tests on elastomeric materials in air and liquids, simulating conditions up to 250°C in accordance with ASTM and ISO standards.

It evaluates changes in mechanical properties, hardness, and mass or volume before and after exposure, making it essential for accelerated aging tests with accurate measurements and detailed reporting on material property changes.

Brittleness Temperatur Tester - **QualiBrittle BPT-NDAH**

The QualiBrittle BPT-NDAH assesses the low-temperature brittleness of plastics and vulcanized rubber under specific impact conditions, ideal for evaluating durability in cold environments.

The process includes immersing specimens in a low-temperature bath before impact, aligning with standards like ASTM and ISO. It is suitable for industries such as plastics, rubber, petrochemicals, and engineering, offering reliable simulations of material performance in cold settings.

Vertical Freezing Tester

The Vertical Freezing Tester evaluates the bending and flexing durability of materials such as rubber, plastic, and synthetic leather in cold environments. Its vertical design simplifies specimen installation, enhancing efficiency and convenience.

The tester complies with international standards like ASTM D1790 and JIS K6545, ensuring reliability in assessing material performance under cold conditions.

Thickness Gauge - **QualiTG-A**

The QualiTG-A Thickness Gauge is a precise and user-friendly instrument for measuring material thickness.

With interchangeable bases, modular weights, and compatibility with ISO 23529 & ASTM D 3767, it delivers consistent, repeatable results.

Built from corrosion-resistant materials, it ensures reliable performance even in high-humidity environments.

Ross Flexing Apparatus / Flex Tester

The QualiRoss1052 Flex Tester evaluates the resistance of rubber, PU, PVC, TPR, and other materials to cut growth under repeated flexing.

By simulating long-term flexing at controlled speed and frequency, it provides reliable data for durability, quality assurance, and compliance with international standards.

Parallel Plate **Plastometer**

The Parallel Plate Plastometer is designed to determine the plasticity and recovery values of rubber materials, including unvulcanized, compounded, and reclaim rubber.

High plasticity rubbers show lower plasticity numbers, providing insights into flow and elastic properties that are critical for forming and extrusion processes.

Conforming to ASTM D926 and ISO 7323, this tester ensures reliable, standardized, and accurate evaluation for research, development, and quality control.

Water **Bath**

The QualiWB100 Water Bath is designed to evaluate material performance under controlled water immersion conditions.

By replicating real-world exposure, this jadi buruh manufacturers assess stability, water absorption, expansion, and discoloration of materials.

Suitable for industries such as construction, automotive, electronics, textiles, and medical devices, it provides reliable testing for quality assurance and product durability.

Drying **Ovens**

Qualitest Drying Ovens are designed for precise preheating and drying of materials across diverse industries.

Featuring advanced temperature control, they ensure consistent, reliable conditioning for applications in aerospace, automotive, construction, electronics, textiles, leather, and medical devices.

Available in benchtop and floor-standing models, these ovens deliver accuracy and durability for both laboratory and industrial use.

Low Temperature **Compression Set Tester**

The Low-Temperature Compression Set Tester evaluates the compression set properties of vulcanized and thermoplastic rubbers under low temperatures.

Conforming to ISO 815 Method 2, it measures material thickness recovery after compression, providing reliable data on durability, elasticity, and long-term performance in demanding environments.

Key QualiBenefits

Best Price Guarantee:
Qualitest is committed to delivering top-quality, competitive Rubber and Elastomer Testing Technologies at unbeatable prices. If you can find a similarly featured product at a lower price, we'll match it.

#1 Source For Testing Technologies:
Supplying a comprehensive range of testing equipment for every industry, Qualitest serves as a one-stop source, streamlining the ordering, maintenance, and management processes.

ISO 9001 Certified:
Benefit from our commitment to quality through this internationally recognized standard, ensuring exceptional products, outstanding customer service, and regulatory compliance.

Efficient Global Logistics:
Experience quick delivery of standard products through our extensive network of worldwide distribution centers. Qualitest delivers the tools you need quickly and reliably.

Trusted Partner for Fortune 500 Companies:
As the preferred choice for the world's largest and most recognized organizations, the security and assurance Qualitest offers keep our clients at the leading edge of their respective industries.

Exceeding Global Standards:
Qualitest products are crafted to not only meet but exceed the latest North American and global standards requirements, ensuring uncompromised quality.

QualiRewards™ Loyalty Program:
We offer a rewarding loyalty program that provides additional discounts, offers, and upgrades to our valued customers.

Centralized Support & Service:
With a central service hub and a global QualiService authorized network, we deliver efficient customer service and support.

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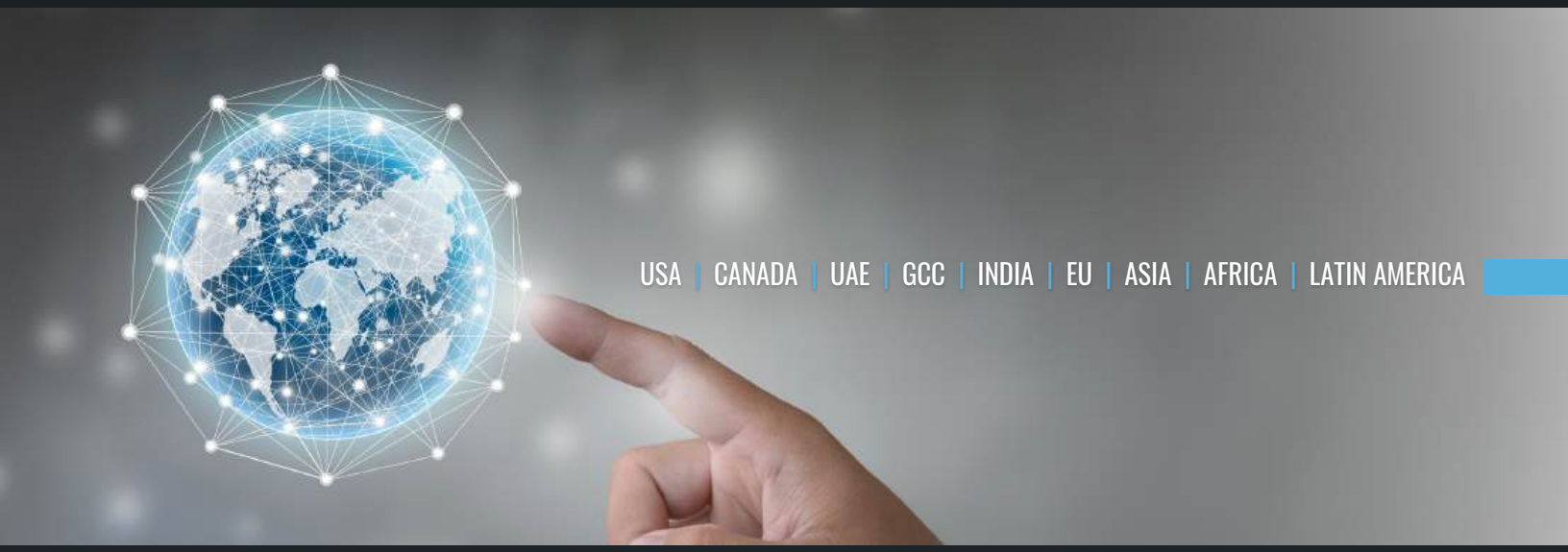

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Contact our **QualiTeam** today to find out how we can help your organization **select the most suitable testing solution** for your application, requirements, and budget.

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