

ADMET Testing Systems

Product Catalog



Since 1989. Made in the USA.

Welcome to the World of ADMET

Since 1989, our loyal customer base has grown to include thousands of leading manufacturers, commercial testing labs, government agencies, researchers and universities across a wide array of industries and applications. During this time, I have been amazed by all the ways customers have used our systems and have learned that maintaining a high level of technical expertise is important to our success. That is why you will find that we know what questions to ask and present solutions that are both sensible and practical. As ADMET has grown, we have remained steadfast to four main principles:

- Make each system reliable, easy-to-use and easy-to-learn (training less than a day).
- Always be willing to make product enhancements or customize a system to satisfy a customer requirement.
- Offer the best value in the industry when comparing price to performance.
- Make customer service our number one priority by responding immediately to any product support issue.

ASK ADMET about your next materials testing application. I think you will appreciate the high level of attention and service you will receive.



Richard Gedney

CEO and Founder

ADMET Calibration, Maintenance and Training Services

- ADMET offers ISO/IEC 17025 accredited calibration services to customers who operate both ADMET equipment and systems made by other manufacturers. We serve all major global markets and our scope covers virtually all calibration requirements for mechanical/materials testing.
- For those customers that require it, ADMET offers IQ/OQ Validation/Documentation and Software Validation Services. During the IQ/OQ validation process, a software validation will be performed to show the customer how and where calculations come from for their specific testing.
- ADMET's full onsite training process begins with system and materials safety awareness and continues to take users through hardware and software setup and detailed systems operations. By the end of the training, users will be able to create and recall saved test methods, recall and recalculate test results, modify testing procedures and perform tests.
- ADMET offers testing system maintenance services to ensure years of trouble free operation, maximizing your investment. A qualified ADMET technician will perform maintenance on the system including inspection of all critical components and lubrication where required, troubleshooting of any potential issues, and software updates.

eXpert 7600 Series Single Column Universal Testing Machines



eXpert 7601 - 1kN Single Column UTM
Equipped with three point bend fixture and frame mounted touch panel computer.



eXpert 7602 - 2.5kN Single Column UTM
Equipped with 90 degree peel fixture and frame mounted touch panel computer.



eXpert 7603 - 5kN Single Column UTM
Equipped with long travel extensometer, vice grips and frame mounted touch panel computer.

ADMET eXpert 7600 Series Single Screw Machines are designed for tough service with bench-top convenience. They are capable of performing a variety of mechanical tests in an affordable and compact package. Efficient in design, units fit within a 16 x 12 inch space while generating up to 5kN of force. Test adhesives, biomaterials, elastomers, films, packaging, plastics, wires, textiles, and other materials with confidence. Extended Stroke Single Column Models are also offered.

eXpert 2600 Series Dual Column Universal Testing Machines



eXpert 2610 - 5kN Dual Column UTM
Table top machine equipped with pneumatic rope grips and frame mounted touch panel computer.



eXpert 2611 - 10kN Dual Column UTM
Table top machine equipped with tensile composite shear fixture.



eXpert 2612 - 25kN Dual Column UTM
Table top machine equipped with compression platens, extensometer, composite shear fixture and frame mounted touch panel computer.



eXpert 2613 - 50kN Dual Column UTM
Table top machine equipped with floating roller peel fixture and frame mounted touch panel computer.



eXpert 2614 - 100kN Dual Column UTM
Table top machine equipped with moving body wedge grips and extensometer.



eXpert 2653 - 50kN Dual Column UTM
Floor standing machine equipped with moving body wedge grips and extensometer.



eXpert 2654 - 100kN Dual Column UTM
Floor standing machine equipped with ASTM C1609 bend fixture and frame mounted touch panel computer.



eXpert 2655 - 150kN Dual Column UTM
Floor standing machine equipped with wedge grips and high temperature furnace.



eXpert 2656 - 250kN Dual Column UTM
Floor standing machine equipped with wedge grips and optional eye end inserts for compression platens and frame mounted touch panel computer.



eXpert 2657 - 300kN Dual Column UTM
Floor standing machine equipped with bend fixture and frame mounted touch panel computer.



eXpert 2659 - 600kN Dual Column UTM
Floor standing machine equipped with wedge grips and optional eye end inserts for compression platens and safety cage with interlock.

eXpert 2600 Series Dual Column testers tackle the toughest tests with their superior axial alignment, stiffness, and crosshead guidance. A simple design allows for lower cost, faster delivery, and years of maintenance free operation. All eXpert systems are capable of performing compression, tension, and flexure tests. Extended Stroke and Wider Column Spacing eXpert 2600 Series Dual Column Models are offered.

Ask ADMET - Whether you need a taller, wider, faster, or slower machine, ADMET engineers will work with you to provide a system to meet your testing needs.

eXpert 5600 Series Universal Testing Machines

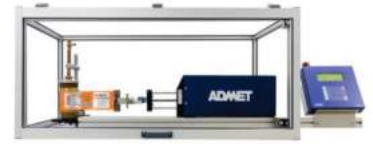
The eXpert 5000 Series testing systems are modular in design; you choose the actuator, test frame and controller to meet your testing needs. Each system features a detachable actuator with fast acting servo motor. Actuators are available in force capacities from 1kN to 10kN with several actuators capable of performing cyclic endurance tests. Load frames are offered in single or dual column table top arrangements and ADMET will even custom design a frame when necessary. Two controllers are available. MTESTQuattro®, a PC based system for more advanced materials and product tests; and the eP2, a standalone digital controller well suited for repetitive quality control testing.



eXpert 5601 - 1kN Single Column UTM
Table top machine equipped with custom tension fixture and the standalone eP2 Digital Controller.



eXpert 5602 - 2.2kN Dual Column UTM
Table top machine equipped three headed 90 degree peel fixture for higher throughput testing.



eXpert 5603 - 5kN Single Column UTM
Table top machine equipped with custom fixture to peel labels off jars. Frame oriented in horizontal orientation with safety cage.



eXpert 5605 - 9kN Dual Column UTM
Table top machine equipped with -70°C to 280°C environmental chamber.



eXpert 5603F - 5kN Dual Column UTM
Table top machine equipped with ASTM D3574-B1 compliant compression platen and machine baseplate for IFD testing of foams.



eXpert 5603AF - 1kN Dual Column UTM
Table top machine capable of 420 in/min travel for performing B1 IFD and I3 Constant Force Pound tests according to ASTM D3574.



eXpert 5603 - 5kN Mattress Testing Sys
Floor standing H frame to accommodate IFD testing of mattresses up to California King size.

eXpert 5900 Series Servo Electric Fatigue Testing Systems

ADMET's eXpert 5900 Series Dynamic Testing Systems are fast acting table top testers ideally suited for performing static and dynamic fatigue tests on a variety of materials and components. These machines are an all electric design using fast acting servo motors to achieve loading frequencies up to 20 Hz.

Continuous Force: 1kN to 10kN

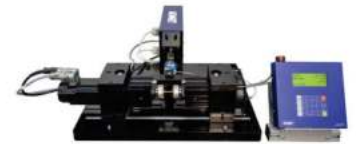
Dynamic Force (3 sec): 2.2 kN to 14kN

Max Speed: Tailored to testing req

Stroke: 152 mm or 254 mm (optional)



eXpert 595X - Electromechanical Fatigue Testing Systems
eXpert 5955 (left) equipped with E1012 alignment fixture and electrically isolated fatigue grips. eXpert 5955 (center) equipped with a custom fixture for testing knee implants in shear. eXpert 5952 equipped with environmental chamber and wedge grips.



eXpert 9300 - Rotating Beam Fatigue
ADMET's Rotating Beam Fatigue Testers feature a dual pivot servo controlled actuator that applies a pure bending moment and is ISO 1143 compliant. Standard models apply moments up to 50Nm at spindles speeds up to 6000RPM. It is ideal for generating S-N curves and evaluating the finite and infinite life of metal samples.

eXpert 1600 Series Servohydraulic Universal Testing Machines - Static



eXpert 16XX - Static Servohydraulic UTM
Capacity: 50kN (11,250 lbf) to 600kN (135,000 lbf)
Max Speed: 140 mm/min (5.5 in/min)
Test Space: 1,143 mm (45 in) to 1,727 mm (68 in)
Stroke: 305 mm (12 in)



eXpert 1600 Series static servohydraulic test systems are available in capacities from 50kN (11,250 lbf) to 600kN (135,000 lbf). With the exception of the 600kN machine, the hydraulic power supply and electronics are integral with the frame thereby saving valuable lab space. eXpert 1600 Series machines are designed for performing tension, compression and bend tests according to ASTM & ISO standards on metals, composites, construction materials and more.

eXpert 1900 Series Servohydraulic Universal Testing Machines - Fatigue

eXpert 1900 Series Servohydraulic dynamic test systems are available in capacities from 10kN (2,250 lbf) to 250kN (56,000 lbf). ADMET offers both top and bottom acting servohydraulic actuators to accommodate a wide range of biomedical, composite and metals testing applications. eXpert 1900 Series hydraulic power units are sized to meet the force-stroke-frequency requirements of each application.



eXpert 1910 - 10kN Top Acting Fatigue

Top acting servohydraulic actuator equipped with fatigue rated custom designed four point bend fixture for performing cyclic tests on graphite material.



eXpert 1912 - 25kN Top Acting Fatigue

Top acting servohydraulic actuator equipped with hydraulic vise grips and extensometer for performing ASTM E466 Force Amplitude and E606 Strain Amplitude controlled fatigue tests.



eXpert 1900 - 250kN Fatigue

Multi purpose machine equipped with hydraulic wedge grips for perform ASTM E606 Strain Amplitude Controlled fatigue tests and customer specific fretting studies.

Servohydraulic - Example Configurations



eXpert 1600 - 1000kN Spring Tester

A custom servohydraulic system designed to test large compression springs used in offshore oil drilling applications.

Features: Full Safety Enclosure, Retractable Safety Retaining Rod, Automated Specimen Loading Table.



eXpert 1900 - Fretting Fatigue System

Biaxial fatigue system equipped with a fretting fixture to evaluate the effect of a mean bulk load on the fretting fatigue life of metal alloys.

Force capacity: 250 kN (56,200 lbf)
Torque capacity: 100 Nm (885 lbf-in)



eXpert 1657 - 300kN Cement Testing

Servohydraulic UTM equipped with environmental chamber to measure the compressive strength of cementitious material at elevated temperatures. Environment simulates conditions found in downhole drilling applications.



eXpert 1657 - 300kN E8 Metals Testing

Test system configured with wedge grips and an axial extensometer for performing ASTM E8 tension tests on metallic samples.

Features: Automatically calculates yield strength, ultimate tensile strength, modulus of elasticity, percent elongation, and more.

eXpert 4000 Series MicroTest Systems - Static and Dynamic

eXpert 4000 Series Micro Tensile, Compression and Torsion Testers and Stages can operate standalone or are offered for insitu mounting with SEM chambers and optical microscopes to observe micro structural changes under a variety of stress-strain fields. eXpert 4000 MicroTest systems are designed for static and dynamic testing and are offered with heated fluid baths, high temperature heating elements (>1000C) and environmental chambers. eXpert 4000 MicroTesters are helping to drive innovations in new materials from biomaterials, metals, fibers, threads, thin films, high temperature materials and more.



eXpert 4200 - MicroTester in Environmental Chamber

Designed for use in environmental chamber. Frame components and tensile grips are rated up to -80°C to 280°C.

Capacity: 5 kN (1,250 lbf)
Max Speed: 25 mm/min (1 in/min)



eXpert 4100 - With Digital Microscope

Equipped with a 200x microscope for recording the specimen break when testing the strength of individual stent welds.

Capacity: 45 N (10 lbf)
Max Speed: 25 mm/min (1 in/min)



eXpert 4900 - Electrodynamic MicroTester

System designed to measure the viscoelastic properties of healthy and cancerous tissue.

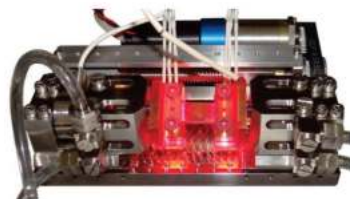
Capacity: 45N (10 lbf)
Cyclic Frequency: 100 Hz
Displacement Resolution: 10 nm



eXpert 4000 - Axial-Torsion

Designed for axial-torsion testing in a Scanning Electron Microscope (SEM).

Axial Capacity: 1.5 kN (1,250 lbf)
Torsional Capacity: 0.5 Nm (4.43 lbf-in)
Axial Speed: 5 mm/min (0.2 in/min)
Torsional Speed: 2.7 RPM



eXpert 4200 - High Temperature

Engineered to perform Electron Backscatter Diffraction (EBSD) Analysis in Zeiss Scanning Electron Microscope (SEM). Includes specimen heating elements (650°C) and liquid cooled grips.

Capacity: 2.2 kN (500 lbf)
Max Speed: 3 mm/min (0.12 in/min)



eXpert 4200 - In Vacuum Chamber

Engineered to measure the defect accumulation under stress in high-temperature composites. Designed to fit in customers vacuum chamber.

Capacity: 250 N (56 lbf)
Max Speed: 36 mm/min (1.4 in/min)



BioTense - Perfusion Bioreactor

Unique to the BioTense is its ability to apply uniaxial mechanical stimulation and directly observe cell/matrix interaction at high magnification over long periods of time. The bioreactor sits atop an XYZ microscope stage.

Capacity: 45 N (10 lbf)
Stroke: 25 mm (1 in)

eXpert 9000 Series Torsion Testing Systems - Static and Dynamic



eXpert 8600 - 50Nm Vertical System
Configured with -70°C to 280°C Environmental chamber and dead weight pulley system.



eXpert 8900 - 5Nm Fatigue System
Configured with reaction torque transducer on sliding tail stock. System applies sinewave cyclic torque amplitude profiles up to 5Hz on UV sensitive polymer.



eXpert 8600 - 25Nm Vertical System
Configured with rotary torque transducer and dead weight pulley system for recording torque while driving lag screws into wood.

eXpert 9000 Series Table Top Torsion Testing Machines are available in vertical or horizontal orientations in capacities from 5 Nm (44 lbf-in) to 300 Nm (2,650 lbf-in) for static and fatigue testing applications. Horizontal systems feature a fixed spindle with sliding tail stock while vertical systems employ a sliding drive spindle. A reaction torque transducer can be mounted to the tail stock or a rotary torque transducer can be mounted to the drive spindle to accommodate a wide range of applications.

eXpert 8000 Series Axial-Torsion Testing Systems - Static and Dynamic

eXpert 8600 Axial-Torsion Test Systems feature oil free linear and rotary actuators for clean room operation, unlimited torsion actuator rotation, coordinated and independent movement between actuators, wide column spacings, and large actuator strokes for maximum flexibility. Systems are offered as floor standing and table-top units and come equipped with ADMET's MTESTQuattro® Controller. The control software enables users to get the most out of a single test system; users can perform uniaxial tension/compression tests, torsion only tests or axial-torsion tests with complex control profiles required for advanced studies in material mechanics.



eXpert 8600 - ASTM F543 System
Configured to test metallic medical bone screws according to ASTM F543 with the required fixturing for methods outlined in Annexes A1-A4.
Force Capacity: 2.2 kN (500 lbf)
Torque Capacity: 20 Nm (180 lbf-in)



eXpert 8600 - Solid Ice Specimen Testing
Designed to replicate artice conditions.
Force Capacity: 5 kN (1,125 lbf)
Torque Capacity: 50 Nm (445 lbf-in)
Axial Speed: 0.0000254 - 9.14 in/min
Rotational Speed: 0.0000003 - 0.01 RPM
Features: Environmental Chamber



eXpert 8900 - Axial-Torsion Machine for Orthopedic Device Testing
Engineered to perform both ASTM F2077 and F1717 on one system.
Force Capacity: 17.5 kN (3,934 lbf)
Torque Capacity: 80 Nm (708 lbf-in)
Dynamic Capability: Up to 10 Hz
Max Rotational Speed: 900 rpm

eXpert 8000 Planar Biaxial Testing Systems - Static and Dynamic



eXpert 8000 - Static Planar Biaxial
Force Capacity: 5 kN (1,125 lbf)
Capable of force, displacement, strain control (using DIC system) in addition to sine, square, triangular cyclic waveforms, and independent or synchronized control of X & Y actuators



eXpert 8000 - Fatigue Planar Biaxial
Force Capacity: 1 kN (225 lbf)
Capable of force, displacement, strain control (using DIC system) in addition to sine, square, triangular cyclic waveforms, and independent or synchronized control of X & Y actuators

ADMET Planar Biaxial Testing Systems are engineered for investigating the mechanical behavior of biological tissues, films and textiles subjected to orthogonal stress-strain fields. As a means of emulating real-world conditions, the two orthogonal actuators can be programmed to move independently or in a coordinated motion under force or deformation control. Both static and fatigue tests are performed via ADMET's MTESTQuattro® controller. Suture racks, clamps, pin or finger arrays, rake like grips and heated fluid baths accommodate a wide range of materials and test conditions.



eXpert 8600 - ISO 80369 Small Bore Connectors for Liquids and Gases
Configured to evaluate the performance requirements of small-bore connectors for liquids and gases in medical applications.
Force Capacity: 2.2 kN (500 lbf)
Torque Capacity: 20 Nm (180 lbf-in)

Engineered Solutions - Custom Systems

One of ADMET's core principles is to always be willing to make product enhancements or test system modifications to satisfy a customer requirement.

Our team of experienced engineers will work with you to ensure that the system is designed to meet your exact requirements and will be reliable and easy to use.

ADMET's engineering group is structured to handle unique and demanding projects and we look forward to working with you.



eXpert 5900 - Seat Cushion Tester
This eXpert 5900 was designed to investigate the effect of aircraft passenger wear on seat upholstery fabrics and fire blocking layers. The dynamic movement can be controlled by both position and load.



Solar Panel Bend Testing System
The system includes a specialized bend fixture for solar cells, a camera to capture solar cell crack propagation, and the voltage drop is recorded by the controller to indicate cell damage.
Axial Capacity: 5 kN (1,125 lbf)
Features: Custom Blackout Safety Shield



900kN Horizontal Pipe Tensile Tester
This large custom servohydraulic system is engineered for customers who need to test entire pipe sections and their fusion welds. The system features a dual stage hydraulic power unit to allow faster speeds when jogging the actuator under no load conditions.

Retrofits and Upgrades

ADMET retrofits electromechanical and hydraulic testing machines from Baldwin, INSTRON, MTS, Riehle, SATEC, Shimadzu, Tinius Olsen, United and more. We'll add MTESTQuattro® or a digital controller, a new servo hydraulic power unit or servo motor and make it run like never before. Our retrofit solutions range from adding a digital indicator and pressure transducer to converting a manually operated machine to full computer automatic control. We have a staff of experienced engineers that will help you select the retrofit solution that meets your needs. And, as technology advances, you can be sure we will not leave you behind. **ASK ADMET today!**

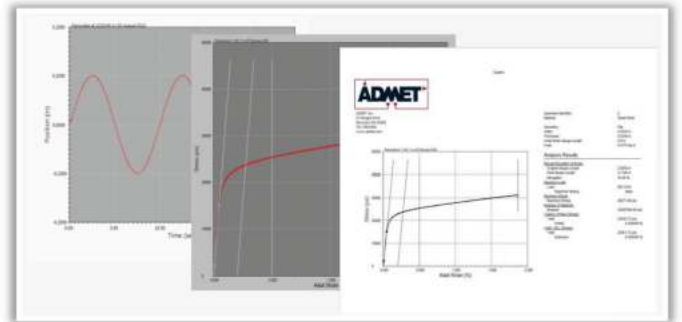


Select the Software and Controls to Meet Your Needs

Powerful Windows/PC based software - All testers and retrofit packages can be supplied with ADMET's simple to use but powerful MTESTQuattro® Materials Testing System which features a price/performance ratio that is unsurpassed in the industry. MTESTQuattro® is ideal for a wide variety of static and dynamic testing applications including Quality Control, Production QA, Research, Education, and Product Development.



Engineered for Flexibility - MTESTQuattro® can generate test reports and X-Y plots for ASTM, JIS, SAE, TAPPI, Euro Norm and many other requirements. Results data and X-Y plots can be presented in a single test report or a group of like tests can be combined to generate a statistical summary for each analysis result. MTESTQuattro® has the capability to perform all common mechanical tests and by creating your own test methods has the ability to perform tests of varying complexity. Intuitive setup menus and large easy-to-read displays make MTESTQuattro® easy-to-use and quick to learn.



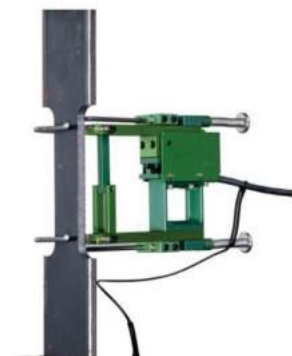
MTESTQuattro® can be installed on manually operated or servo controlled testing machines. It features monotonic, cyclic and segmented profiles and is capable of performing static and dynamic tests.

Digital Control and Readout Options - For users that do not require the power and sophistication of MTESTQuattro®, ADMET offers a line of digital indicators and controllers to satisfy a variety of test requirements. Indicate peak load/stress, perform a test under strain rate control, print a stress-strain curve or download raw test data and results for further analysis and reporting. From simple peak load indicators to fast-acting digital closed loop controllers and displays, **ADMET has a solution for you.**

Grips, Fixtures and Accessories



ADMET offers a full line of grips, fixtures, environmental chambers, furnaces, heated fluid baths, contacting and non-contacting extensometers and sample preparation equipment for materials and product testing. The accessories we sell support our entire line of universal testing machines. They can also be used with virtually any manufacturer's test frames and with ADMET retrofitted equipment. ADMET offers hundreds of grips to accommodate all of your testing requirements.





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