

Biomedical Testing Systems

ADMET is a leading manufacturer of innovative materials testing systems for biomaterials and medical devices. Our systems are employed the world over in both research and quality control settings. We offer a full range of grips, fixtures, fluid baths and environmental chambers for testing your biomaterials and devices according to ASTM and ISO standards. We are also willing to modify a system to meet your needs. All ADMET testing systems exceed ASTM and ISO accuracy requirements and are backed by a service and calibration team of over 100 individuals in 40 locations.

eXpert 8600 Axial-Torsion Testing Systems



As a means of determining the mechanical properties of screws in torsion, characterizing medical implant interconnections and intervertebral body fusion devices, testing Luer taper fittings for leakage and separation forces, measuring the adhesive properties of biomaterials in shear, validating constitutive models and simulating real-world stress conditions, ADMET offers a full line of table top and floor standing axial-torsion testing systems capable of performing the following tests and more.

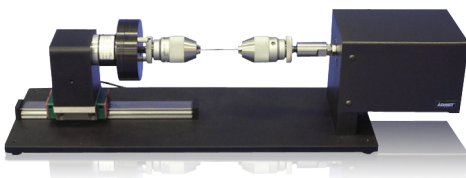
- **ASTM F543 A1-A4:** Test Method for Metallic Bone Screws
- **ASTM F1541:** Test Methods for External Skeletal Fixation
- **ASTM F1798:** Static and Fatigue Properties of Interconnection Mechanisms and Subassemblies Used in Spinal Arthrodesis Implants
- **ASTM F2077:** Test Methods For Intervertebral Body Fusion Devices
- **ISO 594:** Test Methods for Luer Conical Fittings

eXpert 3900 Electro Dynamic Fatigue Testing Systems

eXpert 3900 series machines employ electrodynamic linear motor technology for both static and high frequency dynamic fatigue testing (Up to 100Hz). With model capacities up to 5 kN, these electrodynamic test systems are used to evaluate the mechanical properties of biologic materials, prostheses, spinal constructs, stents, dental implants, elastomeric materials, and more. A variety of grips and strain measuring devices are available for determining the elastic modulus, tensile strength and elongation of soft tissue, gels, and bone. In addition, heated fluid baths are offered to facilitate testing in vitro. eXpert 3900 series machines provide the sensitivity and resolution to accurately test soft biologic materials at low forces but are robustly designed to perform multi-million cycle durability tests. Examples of test methods that can be performed on the eXpert 3900 series machines are: ASTM F1440, ASTM F1717, ISO 14801.



eXpert 9000 Series Torsion Testing Systems



eXpert 9000 series table top torsion testing machines are ideal for determining the torsional properties of screws, bone, biomaterials used in fracture repair, wire used in dentistry, and more. eXpert 9000 Torsion Testing Systems feature:

- Horizontal and vertical orientations
- Static and fatigue testing solutions
- Unlimited rotation in both directions
- Sliding tailstock; can be left free floating or clamped

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Fixture for Testing Syringes



Pneumatic Grip for Suture Testing

eXpert 2600/5600/7600 Series UTMs

eXpert 2600/5600/7600 series single and dual column universal testing machines are well suited for testing syringes, suture material, medical packaging and tubing, external fixating devices, medical adhesives, and more. Researchers have also used these systems to test biologic tissues and gels. Whether it is testing to an in-house, ASTM or ISO standard, ADMET offers a full line of grips, fixtures, fluid baths and environmental chambers to meet your needs.

- eXpert 7600 Series Single Column Table Top Universal Testing Machines (Capacities to 5kN)
- eXpert 5600 Series Modular Single Column Table Top Universal Testing Machines. Frame can be configured for vertical or horizontal operation (Capacities to 5kN)
- eXpert 2600 Series Dual Column Table Top and Floor Standing Universal Testing Machines (Capacities to 200kN)

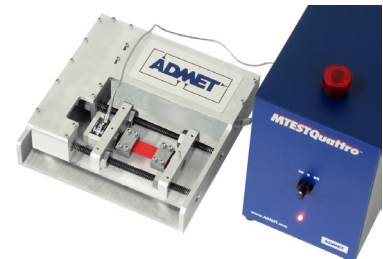
MicroTest & MicroEP Testing Systems

The MicroTest and MicroEP are miniature low force portable testing systems that are ideal for determining the mechanical properties of tissue, bone, fibers, metals, stents, and more. These units are offered with grips, clamps and fixtures for performing tension, compression and bend tests in addition to quasi static fatigue tests. The MicroEP features two moving crossheads so that the centroid of the specimen remains fixed in location. Systems can be configured to sit atop a microscope stage for viewing material behavior at the microscopic level. ADMET software and controllers enable you to align microscope images with force-displacement data recorded by the ADMET system. Optional fluid baths with heating and cooling are also available.

- MicroTest units are available in capacities to 70N with 25mm of stroke at 75 mm/min maximum speed
- MicroEP units are available in capacities to 5kN with 250mm of stroke at 500 mm/min maximum speed
- Both units are offered in horizontal or vertical orientations

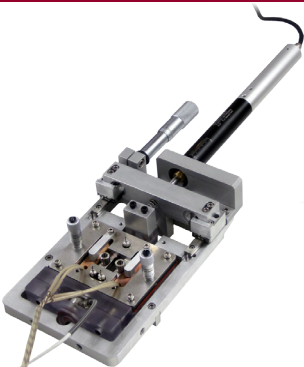


Portable 45N MicroTest for measuring stiffness of biopsy material



1kN MicroEP

BioTense Perfusion Bioreactor for Mechanobiology



- Next generation instrument designed to help tissue engineers and cell biologists perform high resolution investigations in mechanobiology
- Sits atop the XYZ stage of an inverted microscope
- Unique ability to apply uniaxial mechanical stimulation and allow for the direct observation of cell/matrix interaction at high magnification over long periods of time