

eXpert 3600 Series Biaxial Testing Systems

System Brochure



eXpert 3600 Series Biaxial Testing Systems

As a means of validating constitutive models or simulating real-world stress conditions, ADMET offers two types of biaxial testing systems. Each offers an effective way of characterizing materials under several distinct stress-strain fields.

Axial-Torsion Biaxial

ADMET eXpert 3600 Axial-Torsion Dual Column Test Frames feature high axial and torsional rigidity which make them ideal for performing static or dynamic tests on a wide array of materials and components. Systems equipped with ADMET's MTESTQuattro® Controller provide the capability to perform tests according to ASTM and ISO standards on medical and dental implants, spinal constructs, bone plates and screws, biomaterials, adhesives and more.

All axial-torsion testers feature oil free linear and rotary actuators for clean room operation, unlimited torsion actuator rotation, independent movement between actuators, wide column spacings, and large actuator strokes for maximum flexibility.

ADMET also provides a variety of axial-torsion grips and chucks. Specimens can be tested in air or an optional fluid bath with heating and cooling can be provided to produce the desired physiological environment. Various low force load and axial-torsion transducers are available to meet your testing needs.

Model		3601 Table Top	3610 Floor	3611 Table Top	3612 Table Top	3653 Floor	3654 Floor
Rating		Static	Fatigue	Static	Static	Static	Static
Maximum Force Capacity	lbf kN	50 0.2	1,125 5	2,250 10	5,000 25	10,000 50	20,000 100
Maximum Speed	in/min mm/min	2 50	1,180 30,000	40 1,000	20 500	20 500	20 500
Torque Capacity	in-lbf Nm	8.9 1	443.5 50	177 20	177 20	443.5 50	443.5 50
Maximum Speed	RPM	30	100	90	90	100	100
Total Vertical Test Space ¹	in mm	43 1,090	44 1,117	48 1,219	48 1,219	44 1,117	44 1,117
Space Between Columns	in mm	12 304	22 558	16.8 426	16.8 426	22 558	22 558

Notes:

1. Total Vertical Test Space is the distance from the top surface of the base platen to the bottom surface of the moving crosshead, excluding load cell, grips and fixtures. Larger openings can be accommodated by ordering an extended column frame.

Load Measurement Accuracy: +/- 0.5% of reading down to 1/100 of load cell capacity. Meets or exceeds ASTM E4, BSENIS 7500-1: 2004, DIN 51221 and JIS B7721 standards. ADMET self-identifying load cells are offered with all systems.

Strain Measurement Accuracy: +/- 0.5% of reading down to 1/50 of full scale with ASTM E83 class B extensometers. Meets or exceeds ASTM E83 and BSENISO9513: 2002 standards.



ADMET eXpert 3600 Floor-Standing (L) and Table Top (R) Axial-Torsion Test Systems

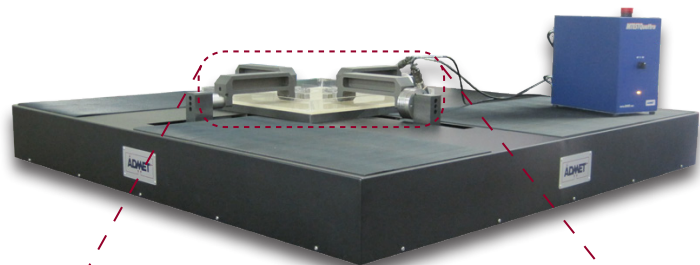
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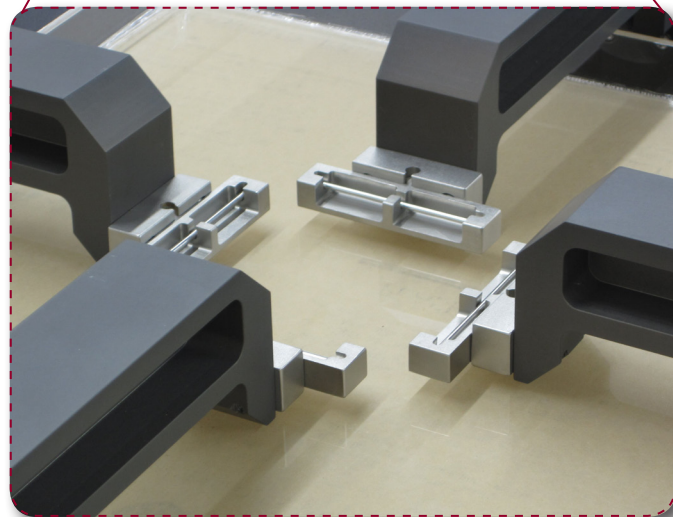
Planar Biaxial

ADMET eXpert 3600 Planar Biaxial Testing Systems are well suited for investigating the mechanical behavior of biological tissues and films 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. Each axis features two crossheads that move in equal and opposite directions so that the sample center point remains stationary.

Suture racks, clamps, or pin arrays are offered for holding specimens in a trampoline like fashion. ADMET also provides specimen jigs to ensure consistent specimen setup. Specimens can be tested in air or an optional fluid bath with heating and cooling can be provided to produce the desired physiological environment. Various low force load cells and optical strain measurements provide accurate force-strain data.



ADMET eXpert 3600 Planar Biaxial Test System



Detail of outlined area

- Offered in capacities up to 2 kN (500 lbf)
- Actuator strokes and speeds are tailored to specimen size and testing requirements
- Capable of static and fatigue tests
- ADMET's MTESTQuattro® controller provides a TTL camera trigger output for syncing test data with third party microscope/camera images

Sales and Service

Training and Service: ADMET testing systems are easy to learn and use. We provide free introductory on-line training and, if needed, additional on-site training. Our manuals, tutorials, and troubleshooting guides are updated regularly. We provide free phone and email product support through the life of the system. ADMET's on-site service and calibration team includes over 100 individuals in over 40 locations in the USA.

Sales: For more information about biaxial testing systems and other ADMET products, please call 1-800-667-3220. Our sales engineers can also be contacted by email at sales@admet.com.



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For more information and a video tour, please visit:

www.ADMET.com



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