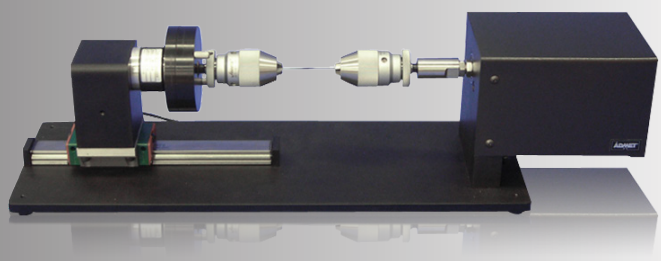
eXpert 9000 Series

Torsion Testing Systems

System Brochure



eXpert 9000 Series

Torsion Testing Systems

Precision, Versatility, and Performance.

Torsion Testing Machines for static and fatigue testing.

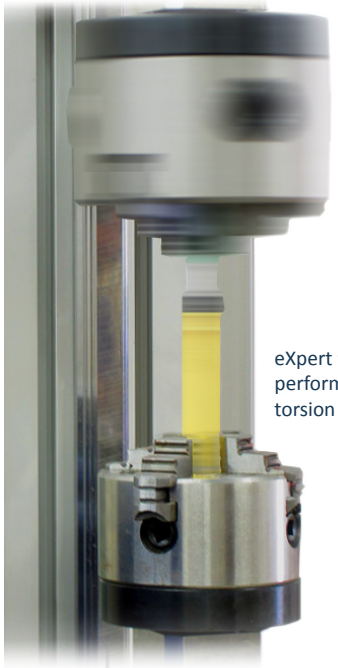
eXpert 9000 Series Table Top Torsion Testing Machines are available in vertical or horizontal orientations for static and fatigue testing applications. Horizontal systems feature a fixed spindle with sliding tail stock while vertical systems employ a sliding drive spindle. Maximum torsional stiffness and minimal axial friction is achieved with a roller slide frame design. 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. In the case of the horizontal machine, the tail stock can be left free floating or clamped during testing. A dead weight pulley system is provided with all torsion testers for applying uniaxial tensile or compressive forces. All torsion testers feature unlimited rotation in both directions.

eXpert 9618 (300Nm) Static, Horizontal

- Table-top models are offered in capacities up to 300Nm (2,650 inlb).
- Models are available for static (9600 Models) and fatigue (9900 Models) testing.
- Test bone screws, fasteners, orthopedic devices, shafting, tubing, wires and other materials with confidence.

eXpert 9612 (20Nm) Static, Vertical

Customizable - Backed by superior engineering and a willingness to tailor a system to meet your needs.



eXpert 9612 performing torsion test

The length of the test bed or frame structure can be modified to accommodate varying specimen lengths and sizes. Test frames can be provided to allow the machine to operate in both a vertical or horizontal orientation. Load cells and displacement sensors can be incorporated to measure axial forces and spindle displacement. Faster spindle speeds are also available .

Custom eXpert 9600 Series 110Nm Static Torsion Testing System for measuring the torsional properties of a large articulating arm (not shown). A rotary torque transducer is mounted to the drive spindle. The drive spindle can be adjusted vertically and has a head to tail stock open range from 0-1,800mm (0-72in). The machine base is 2,210mm (87in) square.

51 Morgan Drive Norwood, MA 02062
Tel: (781) 769-0850 Fax: (781) 769-0884
Sales@ADMET.com www.ADMET.com

Test with Certainty.

eXpert 9000 Series

Torsion Testing Systems

Precision, Versatility, and Performance.

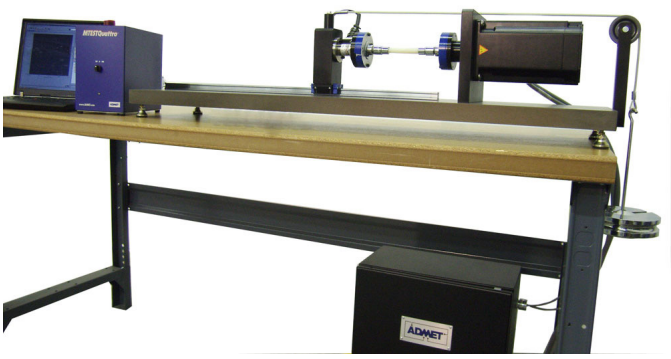
System Specifications

Model		9610 Static	9612 Static	9613 Static	9614 Static	9618 Static	9910 Fatigue	9911 Fatigue	9912 Fatigue
Torque Capacity	Nm lbft inlb	5 3.6 44	20 14.7 177	50 36.5 442	100 73.7 885	300 221 2,650	5 3.6 44	10 7.4 88	25 18 220
Maximum Speed at 110 VAC[1]	rpm	200	90	100	70	40	1,500	1,500	750
Minimum Speed	rpm deg/min	0.01 3.6	0.0045 1.6	0.005 1.8	0.0035 1.26	0.002 0.72	0.075 27	0.075 27	0.038 13.5
Maximum Torque at Full Speed	Nm inlb	5 44	20 177	50 442	100 885	300 2,650	5 44	10 88	25 220
Angle Resolution	deg	0.0014	0.0008	0.0008	0.0008	0.0008	0.09	0.09	0.09
Maximum Angle	deg	infinite	infinite	infinite	infinite	infinite	infinite	infinite	infinite
Head to Tailstock Opening Range[2]	in mm	0-30 0-760	0-30 0-760	0-30 0-760	0-30 0-760	0-30 0-760	0-30 0-760	0-30 0-760	0-30 0-760
Base to Center Line Test Space[3]	in mm	4 100	4 100	4 100	4 100	4 100	4 100	4 100	4 100
Horizontal Frame Footprint	in mm	12 x 36 304 x 1,220	12 x 36 304 x 1,220	12 x 36 304 x 1,220	12 x 36 304 x 1,220	12 x 36 304 x 1,220	12 x 36 304 x 1,220	12 x 36 304 x 1,220	12 x 36 304 x 1,220
Vertical Frame Footprint	in mm	18 x 18 457 x 457	18 x 18 457 x 457	18 x 18 457 x 457	18 x 18 457 x 457	18 x 18 457 x 457	18 x 18 457 x 457	18 x 18 457 x 457	18 x 18 457 x 457
Vertical Frame Column Height	in mm	42 1,066	42 1,066	42 1,066	42 1,066	42 1,066	42 1,066	42 1,066	42 1,066
Maximum Power	VA	330	330	880	1,100	2,750	1,110	2,200	3,300
Single Phase Voltage	VAC Hz	110-220 50,60	110-220 50,60	110-220 50,60	110-220 50,60	110-220 50,60	110-220 50,60	110-220 50,60	220 50,60

ADMET will modify a system to meet your needs.

Notes:

1. At 220 VAC the maximum speed will double.
2. Head to tail stock opening range is calculated without torque cells, grips and fixtures. Larger openings can be accommodated by ordering an extended frame.
3. Base to center line test space is the distance from the top surface of the base plate (horizontal orientation) or column (vertical orientation) to the center line of the rotating spindle. Larger test spaces can be accommodated upon request.



eXpert 9912 (25Nm) Fatigue Testing System

51 Morgan Drive Norwood, MA 02062
Tel: (781) 769-0850 Fax: (781) 769-0884
Sales@ADMET.com www.ADMET.com

Test with ADMET.

eXpert 9000 Series

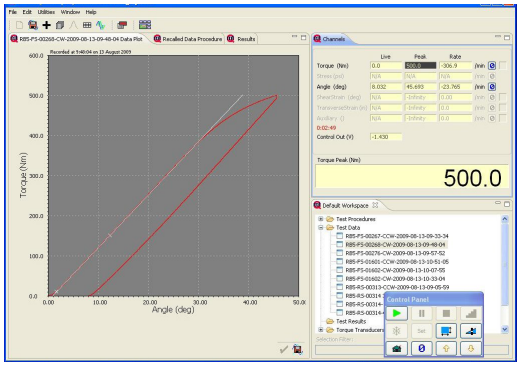
Torsion Testing Systems

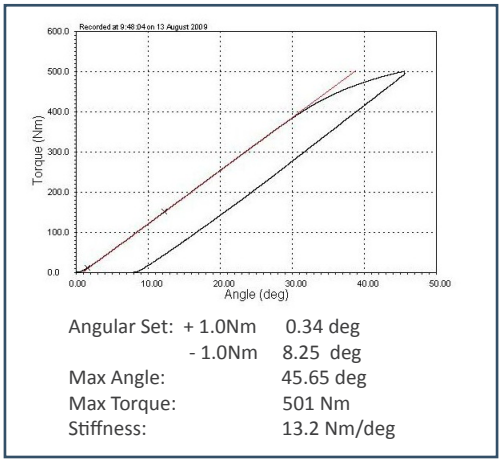
Precision, Versatility, and Performance.

Controls and Software

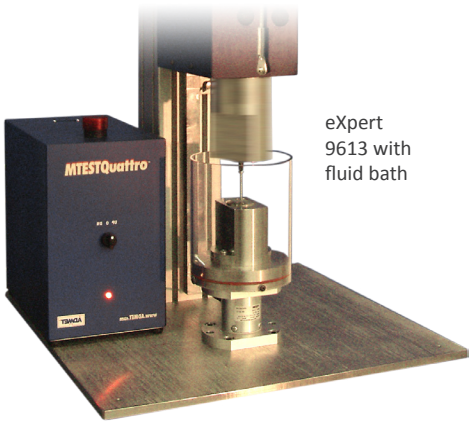
All ADMET eXpert 9000 Series Torsion Testing Machines are equipped with either one of two digital controllers. MTESTQuattro®, our most advanced testing system, is a PC-based unit that offers a wide range of flexibility in control, data acquisition, analysis, and reporting. The eP2 Digital Controller (available on 9600 series static models only), a standalone touch panel unit, offers a balance between performance and simplicity. Both controllers feature 8 kHz servo update periods and programmable log rates to 1 kHz.

Controller	MTESTQuattro®	eP2 Digital Controller
Interface	PC Software	Touch Panel
Analysis	Extensive data results library with built-in ASTM/ISO calculations.	Standard calculation package for basic testing requirements and QC testing.
Test Procedures	Use built-in or create an unlimited number of simple to complex test procedures.	Save up to six test procedures in eP2.
Reporting	Store and organize all data. View and print user customized test reports with chart and tables.	Post test, view current results on eP2 screen and send data to PC for reporting using optional GaugeSafe software.





MTESTQuattro® running on Windows



eXpert 9613 with fluid bath

Accessories

ADMET offers a full line of grips, fixtures, collets, chucks, environmental chambers and temperature controlled baths. For more accurate strain measurements, extensometers or deflectometers can be provided.

Service and Calibration

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 trouble shooting 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.

Calibration - Customers can setup calibration contracts with ADMET or a private party. All services are A2LA accredited and meet ISO/IEC Guide 17025 and ANSI/NCSL Z540.

51 Morgan Drive Norwood, MA 02062
Tel: (781) 769-0850 Fax: (781) 769-0884
Sales@ADMET.com www.ADMET.com

www.ADMET.com