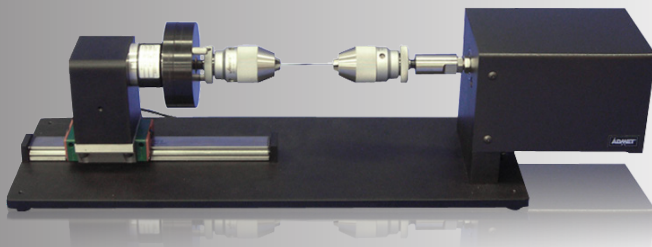


# eXpert 9000 Series

Torsion Testing Systems  
866-945-5742

[info@willrich.com](mailto:info@willrich.com)

## 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

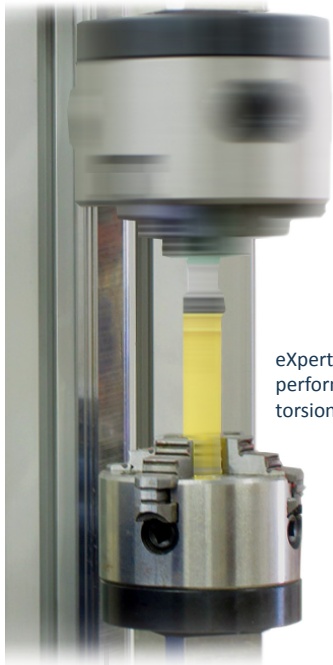
- Table-top models are offered in capacities up to 300Nm (2,650 inlb).
- Models are available for static (9600 Models) and fatigue (9900 Models) testing.
- Test bone screws, fasteners, orthopedic devices, shafting, tubing, wires and other materials with confidence.



eXpert 9612 (20Nm) Static, Vertical

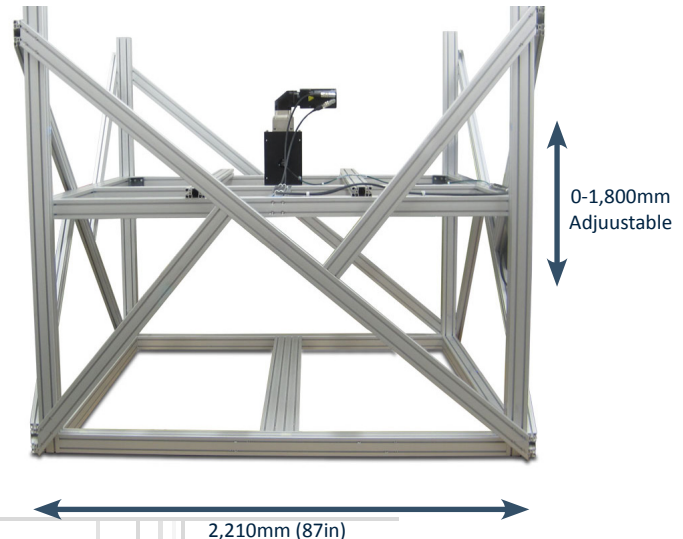
**Customizable** - Backed by superior engineering and a willingness to tailor a system to meet your needs.

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.



eXpert 9612 performing torsion test

*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.*



## eXpert 9000 Series

Torsion Testing Systems

Precision, Versatility, and Performance.

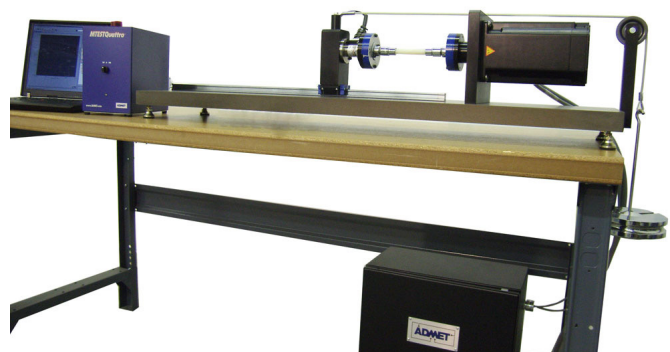
### System Specifications

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

ADMET will modify a system to meet your needs.

#### Notes:

- At 220 VAC the maximum speed will double.
- Head to tail stock opening range is calculated without torque cells, grips and fixtures. Larger openings can be accommodated by ordering an extended frame.
- 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



for customer service 866-945-5742 or [info@willrich.com](mailto:info@willrich.com)

Test with ADMET.

## eXpert 9000 Series

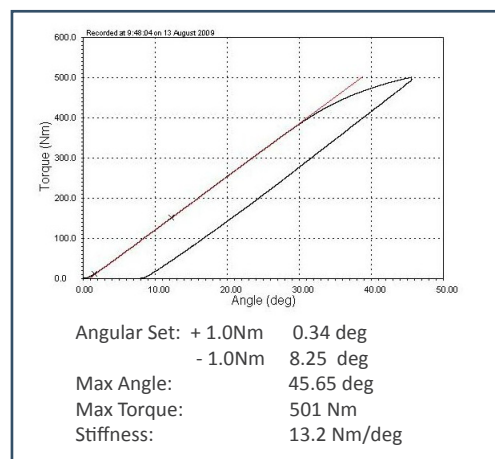
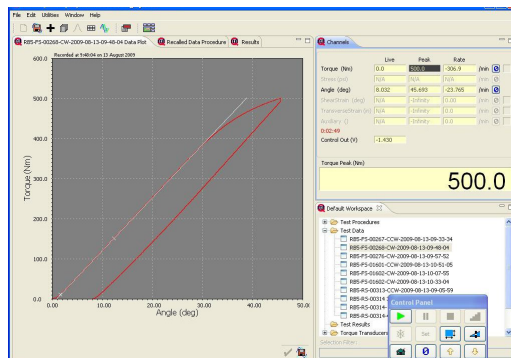
## Torsion Testing Systems

Precision, Versatility, and Performance.

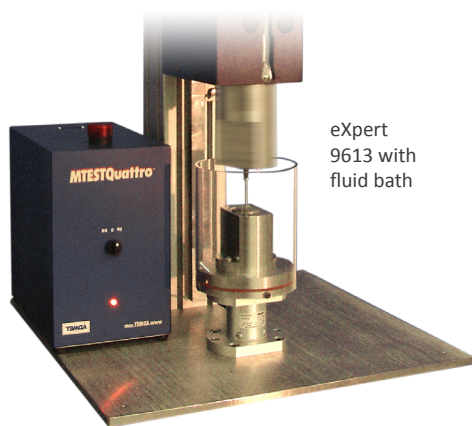
### Controls and Software

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.



for customer service 866-945-5742 or info@willrich.com