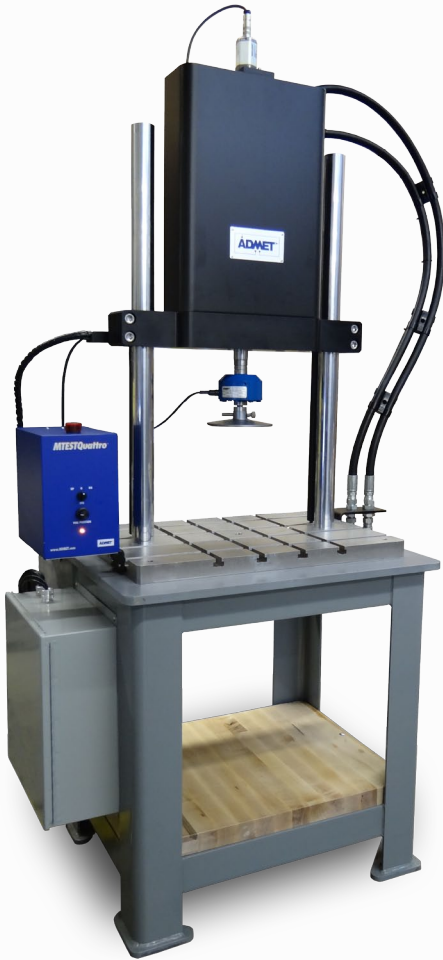


Fatigue Testing Systems



Fatigue Testing Systems



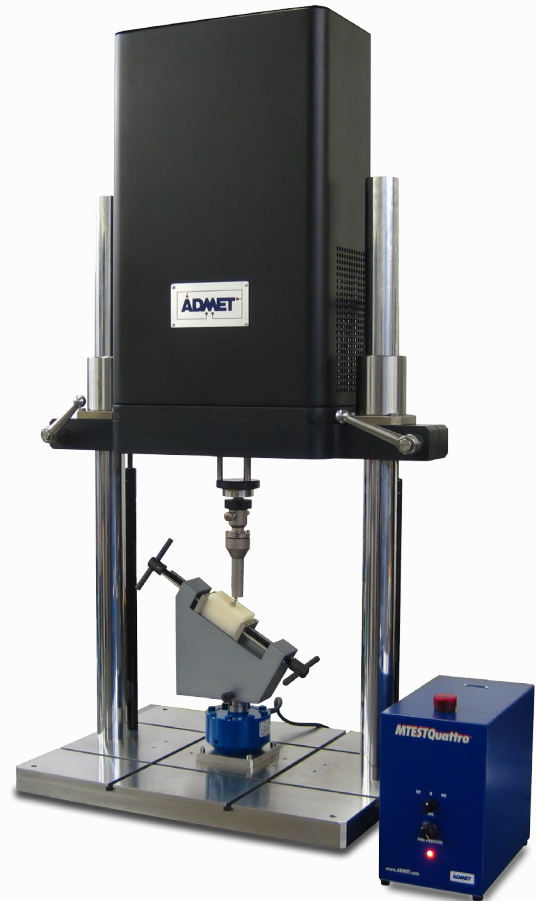
eXpert 1900

Servo-Hydraulic

eXpert 1900 Hydraulic Dynamic test systems are engineered solutions utilizing standard components configured for the specific application. This line is capable of performing dynamic and static testing at speeds dictated by the users hydraulic power unit. Three actuator strokes are available.

Model		1911	1912	1913
Dynamic Force (3 sec)	kN	15	25	50
	lbf	3,370	5,625	11,250
Static Force	kN	15	25	50
	lbf	3,370	5,625	11,250
Position Resolution	mm	0.0152		
	in	0.0006		
Stroke	mm	Select between 102, 152, or 305		
	in	Select between 4, 6, or 12		
Dynamic Capability		up to 20 Hz*		

*depends on hydraulic system



eXpert 3930

Electrodynamic

eXpert 3930 Series Testing Systems are fast acting high efficiency table top electrodynamic testers. These systems use brushless linear motor technology making this system ideal for high frequency testing up to 4.3kN. The electrodynamic actuator connects to single or three phase power; resulting in a clean low maintenance solution.

Model		3931	3933	3934
Dynamic Force (3 sec)	kN	1.3	3.0	4.3
	lbf	292	674	966
Static Force	kN	0.71	1.4	2.0
	lbf	159	314	449
Position Resolution		1 μ m / 39 μ in		
Stroke		50 mm / 2 in (Longer Strokes Available)		
Dynamic Capability		up to 20 Hz*		

*depends on Capacity & Displacement



eXpert 5900

Electromechanical

eXpert 5900 Series Dynamic Testing Systems are fast acting high efficiency table top electrodynamic testers. These systems are ideally suited for performing high capacity dynamic fatigue tests. The 6" stroke of the high precision roller screw actuator opens the door to a breadth of testing applications.

Model		5951	5952	5955
Dynamic Force (3 sec)	kN	4	8	14
	lbf	900	1,800	3,150
Static Force	kN	2.5	5	10
	lbf	50	1,125	2,250
Position Resolution	μm	2.54	1.27	1.27
	μin	100	50	50
Stroke	mm	152		
	in	6		
Dynamic Capability		up to 10 Hz*		

*depends on Capacity & Displacement



eXpert 9900

Torsion

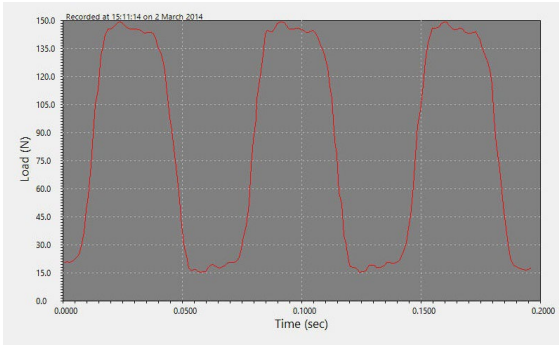
eXpert 9900 Series testers are dynamic torsion testing solutions. This electrodynamic system has the capability of infinite rotation with frequencies up to 20 Hz. Horizontal and vertical systems are available with various options including measuring linear movement and axial load.

Model		9910	9911	9912
Dynamic Torque (3 sec)	Nm	5	10	25
	inlb	44	88	220
Static Torque	Nm	4	8	20
	inlb	35	71	177
Maximum Angle	deg	infinite	infinite	infinite
Angle Resolution	deg	0.09	0.09	0.09
Dynamic Capability		up to 20 Hz*		

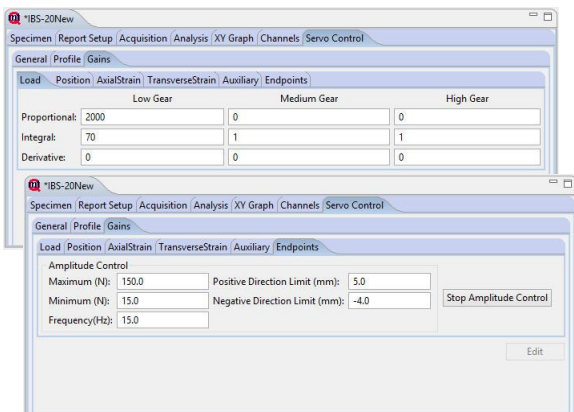
*depends on Capacity & Displacement

Fatigue Testing Systems

Precise Control



	Live	Peak	Valley
Load (N)	119.251	154.842	110.672
Stress (psi)	0	0	0
Position (mm)	0.9	0.9	0.9
AxialStrain (in)	N/A	N/A	N/A
TransverseStrain (in)	N/A	N/A	N/A
Auxiliary_0	N/A	N/A	N/A
4939.02	RUNNING		
Control Out (V)	0.905		Low Gear
Cycle 2628503 of 5000000 Step 2 of 2			
Load Peak (N)	154.842		



MTESTQuattro® dynamic test controller

All Dynamic Fatigue Testing Systems are equipped with ADMET's MTESTQuattro® Controller. MTESTQuattro® includes multiple channels of high resolution input, fast sampling and servo update rates for accurate control and measurement of static and dynamic fatigue tests. An all inclusive analysis suite plus the ability to develop your own test procedures provides the flexibility to perform virtually any test according to ASTM, ISO or customer test specifications. Key features of the MTESTQuattro controller include:

- The ability to program sinewave, sawtooth and complex cyclic control profiles.
- Mixed Mode Control - perform tests where control and end point channels differ (ie. position rate with force end points).
- External Setpoint Mode - allows for third party function generators to provide external waveforms. Ideally suited for performing fatigue crack growth rate and non-linear fracture toughness tests.
- External Profile Mode - reads a formatted text file real-time and executes spectrum fatigue loading profiles which simulate complicated service load conditions.
- Sinewave profiles allow users to adjust the amplitude and frequency on the fly.
- Sinewave amplitude control ensures a constant amplitude as the material fatigues.
- Software position limits terminate the test when the part fails. Position limits can be adjusted during test.
- Shared data file allows for third party data logging systems to record data real-time.

Accessories

Heated fluid baths are offered to facilitate testing in vitro. Environmental chambers are available for testing at sub-zero or elevated temperatures. Custom fixturing specific to an ASTM or ISO specification is also available. Both contact and non-contacting extensometers can be provided for improved strain measurement. In addition, ADMET offers a full line of standard grips and fixtures which can be viewed from our online catalog at www.admet.com.

