ADMET

Metals Testing Systems

Static and Dynamic Testing Systems for Metals Testing

All ADMET systems come with free U.S. based technical and application support

Materials Testing Systems

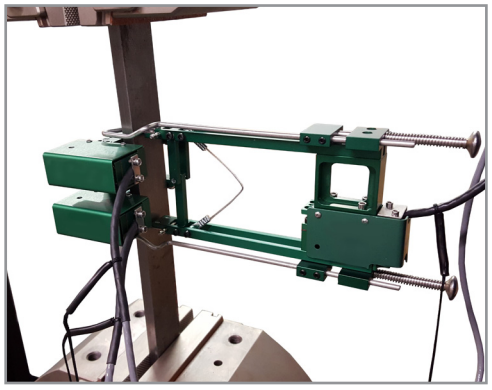
Static Testing Systems

eXpert 2600 - Electromechanical

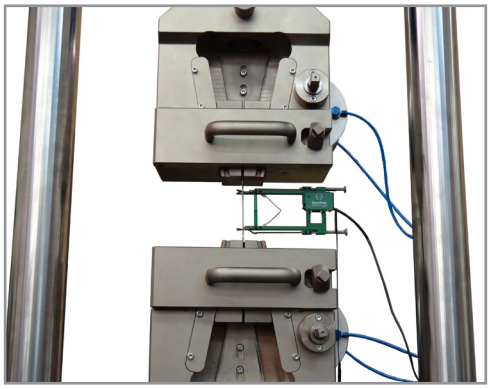
The eXpert 2600 series universal testing machines come in table top and floor standing options with capacities as high as 300kN. When combined with wedge grips, our MTESTQuattro controller and software, and the appropriate extensometers, the eXpert 2600 is ideal for static testing of metals.

These systems configured for the metals industry allow automatic calculation of key parameters such as Peak Load, Ultimate Tensile Strength, Offset Yield, R-Value, N-Value, and Elongation.

eXpert 2600 with extensometer



Extensometer set for metal testing



Wedge grips with axial extensometer

eXpert 1600 with extensometer

eXpert 1600 - Servohydraulic

The eXpert 1600 servohydraulic testing systems are widely used to test metal products at load capacities up to 600kN. ADMET's easy to use servohydraulic systems provide precision by avoiding compensating for piston friction and operating with highly accurate, self-identifying ADMET load cell technology. The pumping system fits inside the machine table on most models, resulting in a compact design.

Operators may choose either electromechanical or servohydraulic testing systems to perform common metals ASTM testing standards such as:

- A370 - Mechanical Testing of Steel Products
- E8 - Tension Testing of Metallic Materials
- E111 - Young's Modulus, Tangent Modulus, and Chord Modulus Testing
- E646 - Strain-Hardening Exponents (n-Values) of Metallic Sheet Materials

eXpert 1900 with extensometer

Dynamic Testing Systems

The eXpert 1900 dynamic servohydraulic testing machines perform fatigue testing of metals at forces up to 600kN. These systems allow automatic calculation of key parameters such as number of cycles to failure, maximum load at failure, dynamic modulus, fracture toughness, and more.

eXpert 1900 dynamic machines can be modified to the operator's needs. Customizable features include the separation between columns, the vertical test space, the power stroke, and the location of the piston.

Common ASTM standards performed include:

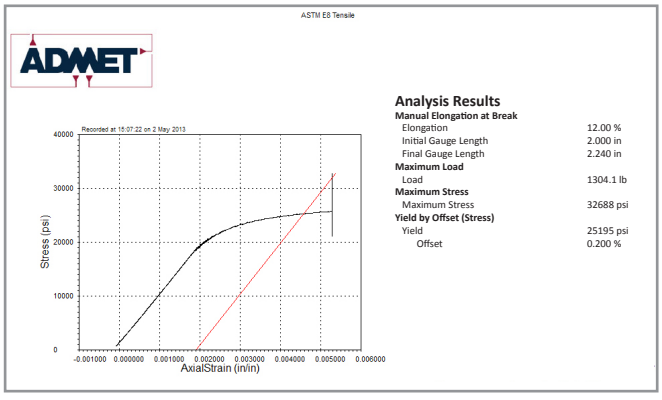
- ASTM E399
- ASTM E647

Hydraulic grips for metal bar testing

Controllers & Software

ADMET's MTESTQuattro controller is a closed-loop servocontrol technology with an industry-leading 1,000 Hz data acquisition rate. eXpert 2600 and eXpert 1600 systems for metals testing come equipped with the MTESTQuattro controller and software. All key test parameters, calculations, and pre-programmed ASTM test methods are included with the standard package. ADMET does not limit the amount of computers the MTESTQuattro software can be installed on.

Furthermore, video extensometers and external data acquisition can be used with MTESTQuattro via shared file access.



MTESTQuattro sample test report for ASTM E8

Depending on the testing application, the eXpert 1900 dynamic testing systems can be equipped with MTESTQuattro or eP2 Dynamic controller. The MTESTQuattro controller is preferred for performing complex fatigue test methods and offers up to eight data recording input channels, while the eP2 Dynamic Controller is a two channel (Force & Position) closed loop servo controller for performing sinewave cyclic dynamic fatigue tests at frequencies up to 100Hz.

Call (800) 667-3220 to talk to an engineer about your metals testing needs!

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System Specifications

Model		Electromechanical				Servohydraulic		
		2612	2613	2653	2654	1655	1657	1658
Load Capacity	lbf kN kgf	5,625 25 2,500	11,250 50 5,100	11,250 50 5,100	22,500 100 10,200	33,750 150 15,000	67,500 300 30,000	135,000 600 60,000
Maximum Speed	in/min mm/min	20 508	20 508	20 508	20 508	19 482	13 330	3.2 81
Minimum Speed	in/min mm/min	0.000002 0.00005	0.000002 0.00005	0.000002 0.00005	0.000002 0.00005	0.001 0.025	0.001 0.025	0.001 0.025
Total Crosshead Travel/Stroke[1]	in mm	46 1,168	46 1,168	46 1,168	45 1,143	12 305	12 305	12 305
Total Vertical Test Space[2]	in mm	52 1,320	52 1,320	51 1,295	50 1,270	42 1,066	42 1,066	42 1,066
Space Between Columns	in mm	16.8 425	16.8 425	22 558	22 558	19 508	19 508	24 609

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Model		1911 Top Acting	1912 Top Acting	1911 Bottom Acting	1912 Bottom Acting	1954 Bottom Acting	1956 Bottom Acting	1958 Bottom Acting
Force Capacity	lbf kN kgf	2,250 10 1,000	5,620 25 2,500	2,250 10 1,000	5,620 25 2,500	22,500 100 10,000	56,200 250 25,000	134,885 600 60,000
Stroke	in mm	6 152.4	6 152.4	6 152.4	6 152.4	6 152.4	4 101.6	4 101.6
Maximum Vertical Test Space	in mm	32 812.8	32 812.8	48 1,219.2	48 1,219.2	48 1,219.2	60 1,524	72 1,828.8
Space Between Columns	in mm	17 431.8	17 431.8	19 482.6	19 482.6	19 482.6	19 482.6	19 482.6
Overall Height	in mm	96 2,438.4	96 2,438.4	101.5 2,578.1	101.5 2,578.1	101.5 2,578.1	101.5 2,578.1	107 2,717.8
Stiffness	lb/in Nm	2.7×10^6 472×10^6	2.7×10^6 472×10^6	3.6×10^6 630×10^6	3.6×10^6 630×10^6	3.6×10^6 630×10^6	3.6×10^6 630×10^6	4.5×10^6 788×10^6

Notes:

1. Total crosshead travel is calculated without load cells, grips, and fixtures. Longer strokes can be accommodated by ordering an extended column frame.

2. 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.

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