ElectroForce®
Testing Solutions For
Dynamic Mechanical Analysis

Versatility for a wide range of materials and component characterization capabilities.

Welcome to **Above & Beyond™** Support
Industry-leading assistance from applications specialists.

Powered by **ElectroForce®** Technology

**Your success. Our mission.™**

TA. | ElectroForce

The ElectroForce® Dynamic Mechanical Analysis (DMA) application provides advanced materials testing and calculation capabilities for more thorough materials characterization. Versatile systems configurations accommodate a wide range of sample sizes and test parameters to meet common and unique characterization needs.

Variety of Control Parameters

Intelligently steps through test conditions for

- Frequency
- Dynamic amplitude for force, displacement or strain
- Mean force or displacement
- Temperature
- Single condition or two overlapping conditions
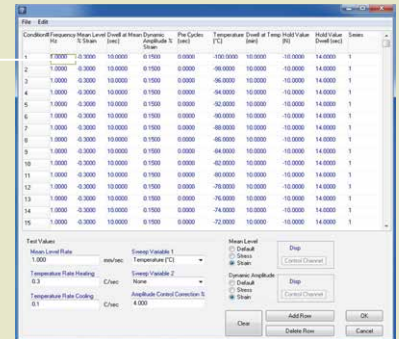
Automatic Calculations

Automatically calculates material and component characteristics

- FFT Analysis
- Materials
    - Complex, loss and storage modulus (E*, E', E" or G*, G', G")
    - Tan delta (tan δ)
- Components
    - Dynamic, storage and loss stiffness (K*, K', K")
    - Phase (δ)
    - Damping (C)
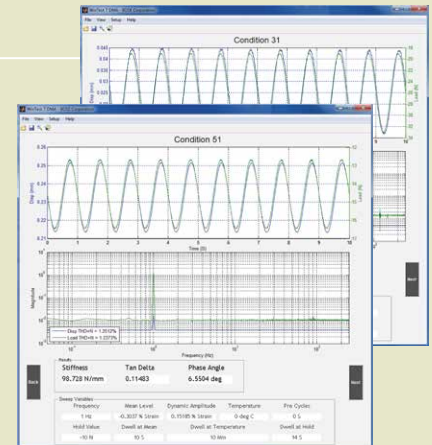
Specimen Versatility

Accommodates multiple sample, fixture and test types

- Tension, compression
- 3-point bend (free end and double cantiliever)
- Single, double and quad lap shear
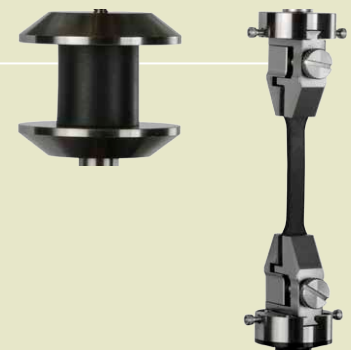
Easy Access to Data

Raw data easily accessible for additional processing

- ASCII format
- 5 kHz acquisition rate
- Provides for simple master curve generation (TTS)

Simple Test Setup

Setting up a test is quick and easy

- Enter test conditions
- Enter sample information
- Run the test
- Save the test file for easy access for future tests
- No tuning is needed
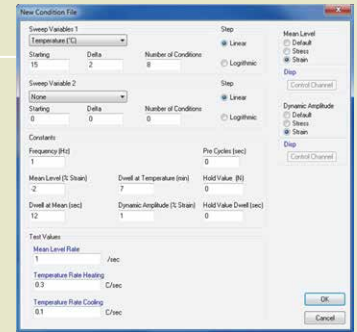
Versatile Display

Multiple user-defined display options are available

- Test status windows show progress of test
- Test results are displayed after each condition
    - Includes Total Harmonic Distortion + Noise (THD + N)
    - Real-time verification of reliable data acquisition
- Collected data may be graphically displayed in a variety of ways
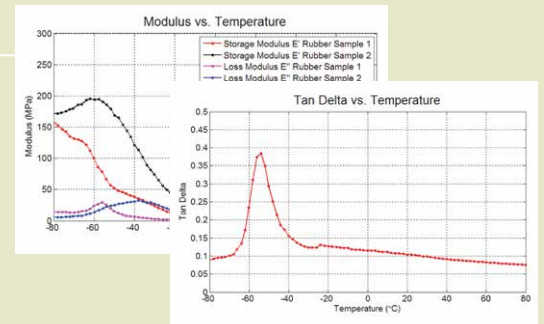
Ongoing Support

The TA commitment to your success includes

- Free lifetime technical support
- Support from applications specialists
- Free initial and ongoing training opportunities

TA | ElectroForce®

Your success. Our mission.™

ElectroForce® Testing Solutions For
Dynamic Mechanical Analysis

With special attention given to the development of the test frame, several ElectroForce® test instuments are designed to provide materials characterization over a wide range of loads, strains, frequencies and temperatures. Find out more at electroforce.tainstruments.com

3100	3200	3330	3500
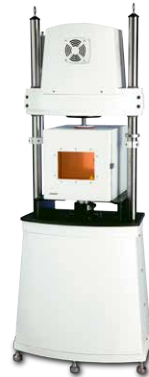
3100	3200	3330	3500
22 N	225 N or 450 N	3,000 N	7.5 kN or 15 kN
5 mm (± 2.5 mm)	13 mm (± 6.5 mm)	25 mm (± 12.5 mm)	50 mm (± 25 mm)
100 Hz max	300 Hz max	100 Hz max	100 Hz max
75 Hz DMA	200 Hz DMA	75 Hz DMA	40 Hz DMA
	-150˚ to +315˚ C*	-150˚ to +350˚ C*	-150˚ to +350˚ C*

*Indicates temperature range of standard temperature chamber. Additional temperature ranges are available.
Specifications subject to change.

The ElectroForce friction-free moving-magnet linear motor provides high performance across a wide force and displacement range, and offers the only 10-year warranty in the industry. In addition to providing exceptional DMA performance, ElectroForce test instruments are designed to accommodate creep and stress-relaxation testing, monotonic tensile and compression testing, high-cycle fatigue and durability testing, and multi-sample and multi-axis testing.

Ask your TA representative for technical information on ElectroForce test instruments and software.

Testing Solutions for
Engineered Materials · Medical Devices · Biomaterials

TA. | ElectroForce®

electroforce.tainstruments.com

Your success. Our mission.™