



DMA + 300
DMA + 1000
DMA + 2000

DMA AND FATIGUE TESTING CAPABILITIES IN A SINGLE MACHINE!

The **DMA+** series instruments are dynamic testing machines dedicated to the fatigue and the viscoelastic properties analysis of advanced materials and industrial components.

metravib-design.com



Each DMA+ makes possible to characterize the mechanical properties of numerous materials and their dependence on various parameters: frequency, temperature, stress or strain amplitude, wave form, environment ... **DMA+300**, **DMA+1000** & **DMA+2000** are resulting of more than 40 years experience of METRAVIB in the development of

innovative machines for the materials dynamic mechanical characterization.

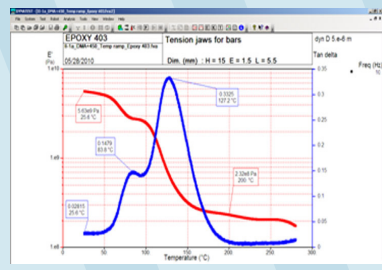
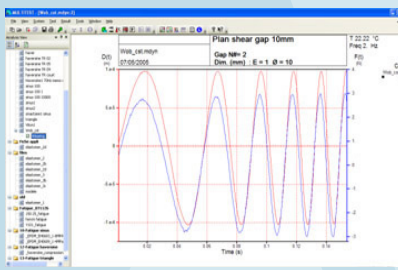
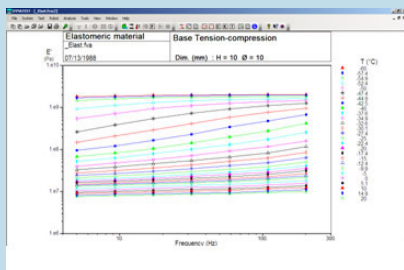
The DMA+ are key instruments for engineers and scientists involved in materials research and development, which provide accurate materials behavior data over a unique range of analysis domains.

MAIN ASSETS

- High rigidity one-piece test frame
- High force electro-dynamic shaker
- High frequency testing capabilities
- Low strain and low force sensitivity
- High strain and high force capability
- Advanced test definition
- Advanced algorithms for precise test control
- Thermal chamber -150°C to 500°C
- Atmosphere control (option)
- Humidity control (option)
- Reduced maintenance
- Reduced foot print

MAIN USES

- DMA testing of a wide range of materials: elastomers, plastics, composites, biomaterials...
- Fatigue testing for material's specimens and industrial components
- Characterization of elastomers: Glass transition, Payne effect, Mullins effect, heat build up...
- Characterization of thermosets: polymerization, exothermic reaction, shrinkage, rheological properties...
- Comparison and classification of complex materials for design engineering
- Static testing (creep, stress relaxation, tensile/compression tests ...)
- Crack growth testing
- Goodrich flexometer testing



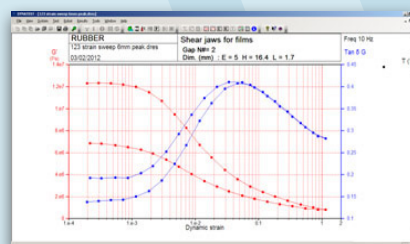
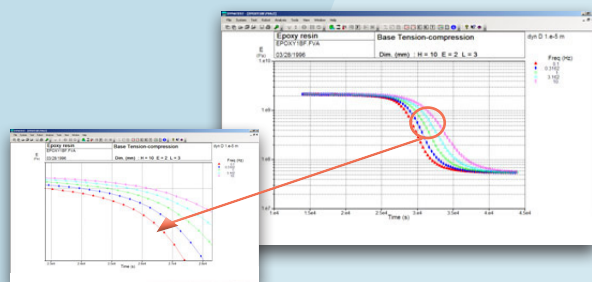
THE REFERENCE IN ELECTRODYNAMIC TESTING

DMA+ series:

A unique combination of the latest advanced technologies provides unmatched performance capabilities. The high performance capabilities of the DMA+ series are due to the combination of significant improvements in mechanical design ("one-piece" mechanical test frame), electronics design, optimized metrologies for the force and displacement signals measurement, and new Metravib

Dynamic testing software suite featuring advanced test control.

The technologies used by METRAVIB DMA+ make possible to provide large excitation force capabilities, and a unique measurement accuracy! One single analysis instrument can then be used to characterize as well a thin and brittle polymer film, as a big specimen of rubber, and will give premium relevant information in both cases!



MAIN SPECIFICATIONS

	DMA+300	DMA+1000	DMA+2000
Excitation			
Frequency (min)	0.00001Hz	0.00001Hz	0.00001Hz
Frequency (max)	200Hz	200Hz	200Hz
Frequency (max - option)	1000Hz	1000Hz	1000Hz
Dynamic force (max)	300N peak to peak	1000N peak to peak	2000N peak to peak
Dynamic displacement (max)	12mm peak to peak	12mm peak to peak	12mm peak to peak
Thermal chamber & environment control			
Internal dimensions (HxWxD)	120 mm x 140 mm x 95 mm		
Temperature (max)	+ 500°C		
Temperature (min)	-150°C		
Materials			
Modulus (min)	250 Pa	500 Pa	500 Pa
Modulus (max)	3E12 Pa	3E12 Pa	3E12 Pa
Measurement range	>7 decades	>6 decades	>6 decades

More than instruments, SERVICES: By choosing METRAVIB instruments, you benefit from:

- Specialists expertise to help you to select the testing platform you need
- Specialists expertise to make you familiar with your testing instrument
- Customized training sessions
- The guarantee to optimize the quality of your tests
- The guarantee to fulfil the evolutions of your testing needs
- A competent and reactive technical support
- Testing services from our application laboratory

