

Dynamic Mechanical Analyzer
DMA7100

HITACHI
Inspire the Next

DMA7100

The New User-Friendliness in DMA

Easy for Everyone

- Simple sample clamping mechanism
- Easy measure navigation software guides even the first time operator

Wide Variety of Measurement Functions

- Dynamic measurement; Sinusoidal wave oscillation and Synthesis wave oscillation mode
- Static measurement; Stress-Strain, Creep / Recovery, and Stress-Relaxation
- Simultaneous Temperature and Frequency Dispersion measurement

Powerful Auto LN₂ Gas Cooling Unit

- Enhance cooling efficiency up to 30%



Variety of Deformation Modes



Tension



Dual-Cantilever
Bending



3-point Bending



Shear

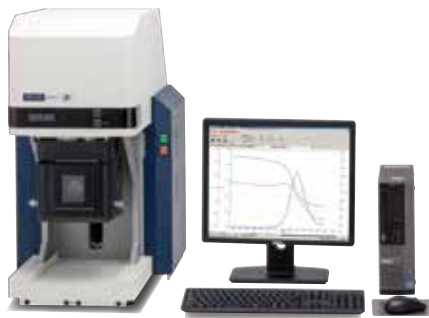


Film-Shear



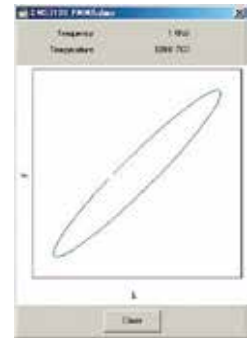
Compression

Dynamic Mechanical Analyzer

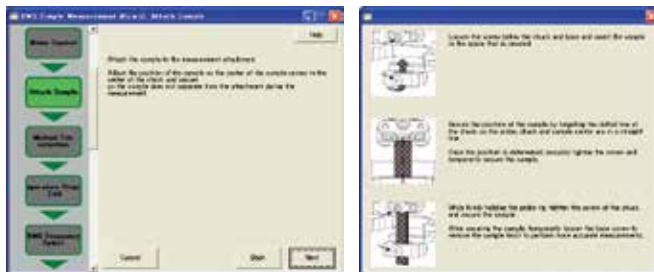


Lissajous Monitor

The DMA7100 equipped with a Lissajous monitor for observing the relationship between stress and strain of the sample under measurement. The deformation of a sample can be verified in real time at every measurement point. The deformation can also be verified after the measurement the saving data in a Lissajous graph, thus supporting high reliability of data acquisition.

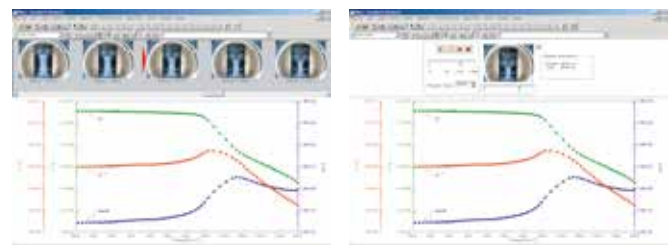


Simple Measurement Wizard



Even the first time user can simply and confidently operate with the Simple Measurement Wizard from its easy-to-follow illustrations. It navigates you every steps, from condition setting to the measurement.

Sample Observation DMA System



Thumbnail View

Slide Show

Sample observation system* displays and saves all the sample alterations by continuous imaging. After the measurement, the saved image can be loaded, linked to temperature and each signal, displayed in a blink, and analyzed.

Model name	DMA7100					
Deformation modes	Tension	Dual-Cantilever Bending*	3-Point Bending*	Shear*	Film-Shear*	Compression*
Measurement modes	Dynamic Measurements : Sinusoidal wave oscillation mode / Synthesis wave oscillation mode Static Measurements : Program stress control / Program strain control					
Frequency	Sinusoidal wave oscillation : 0.01 to 200 Hz, maximum 20 frequencies Synthesis wave oscillation mode : 5 frequencies					
Force range	Dynamic force: ± 10 N / Static force : ± 10 N					
Measurement range (1Hz)	10^5 to 10^{12} Pa	10^5 to 10^{12} Pa	$10^{6.5}$ to $10^{13.5}$ Pa	10^3 to 10^9 Pa	10^4 to 10^{10} Pa	10^5 to 10^9 Pa
Temperature range	-150 to 600°C					
Temperature scan rate	0.01 to 20°C/min					
Gas purge control	300 ml/min (A gas flow controller is built in to main unit as standard.)					
Cooling unit*	Auto LN ₂ Gas Cooling Unit : -150 to 600°C / Forced Air Cooling Unit : Ambient to 600°C					
Dimensions	420(w) × 630(D) × 725(H) mm					

* optional

Hitachi High-Tech Science Corporation

<http://www.hitachi-hightech.com/hhs/>

Head Office Sales Division

24-14, Nishi-shinbashi, 1-chome, Minato-ku Tokyo 105-0003, Japan

Hitachi Instruments (Shanghai) Co., Ltd.

Hitachi High-Technologies America, Inc.

Hitachi High-Technologies Europe GmbH (Mannheim office)

Telephone: +81-3-6280-0062

<http://www.hitachi-hightech.com/hig/>

<http://www.hitachi-hightech.com/us/>

<http://www.hitachi-hightech.com/eu/>