



## Dynamic Mechanical Analyser



### A Trusted Name in Material Testing

- Prescott Instruments Ltd. is a **U.K. company** with **over 30 years' experience** in material testing.
- We manufacture all instruments **onsite in the U.K.** under **ISO 9001** and our in-house laboratory team perform all **instrument calibrations** under **ISO 17025**.
- Our DMA is our most **dynamic and flexible instrument**, offering an **unparalleled range** of testing methods.
- Its **precision, reliability and durability** make it an indispensable instrument for laboratory professionals worldwide.

### Built to Last

- **Productivity:** Our innovative and easy-to-use Labline software enables the user to easily set up tests with **minimum training required**, leading to **test confidence and maximum productivity**.
- **State of the Art:** Our DMA offers **complete user flexibility**, allowing tests on a range of materials, components and systems.
- **Accuracy:** Able to perform tests in a **range of test methods in different deformation modes**, our DMA delivers force control to the most precise accuracy available.

### Repeatability & Connectivity



- Versatile and high precision, our DMA is designed for **dynamic and static testing** on a variety of materials with a full range of force.
- This DMA has a **unique and rigid design** that is easy to operate and maintain, ensuring a **reliable, durable and safe testing operation**.
- This DMA can efficiently produce up to **1.75 kN of static force** and **2.5 kN of dynamic force at a frequency of up to 100 Hz**.
- With **complete user flexibility** the DMA allows you to **test a range of materials**, components and systems, fixed in place by versatile high-performance clamping fixtures.
- Our innovative and easy to use new Labline software **enables the user to set up tests easily with minimal training required**, giving test confidence and maximum productivity throughout.

# Dynamic Mechanical Analyser

## Technical Specification

### New Labline Software

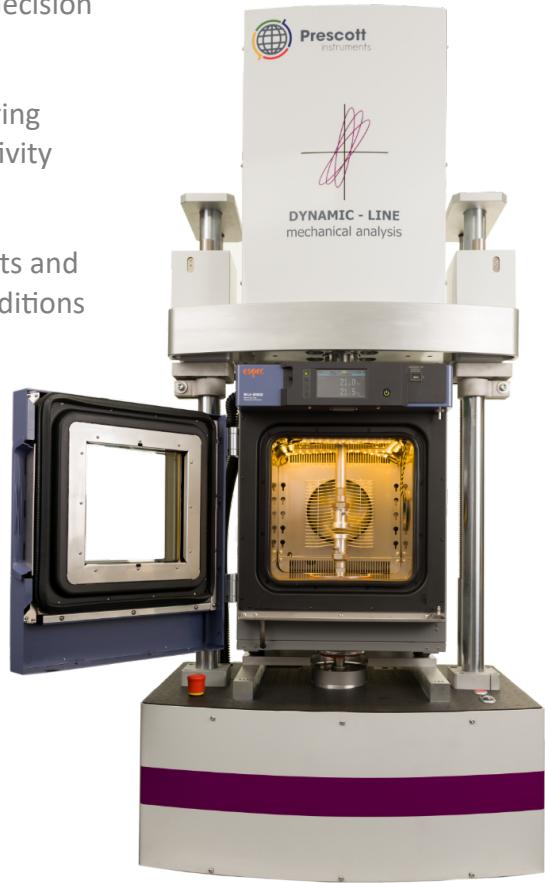
- With state-of-the-art digital architecture, our new Labline software features an easy-to-use interface, delivering clients a user-friendly experience that increases production levels and expedites decision making.
- Our software enables operators to set up tests easily, requiring minimal training and providing test confidence and productivity throughout.
- Labline software can always be relied upon for precise results and offers a high level of flexibility with a wide range of test conditions available.

### Technical Highlights

- Up to 2.5 kN dynamic force and 1.75 kN static force capability
- High frequency testing up to 100 Hz
- Optional Environmental Chamber with temperature range -60 °C to +180 °C
- Precision engineered grips and fixtures for compression, tension, flexure and shear
- Compatible with new Labline software
- Long-term durability supporting a high volume of tests
- Long stroke length of 80 mm
- Moveable crosshead provides a sizeable testing window
- Single phase electricity combined with compressed air supply

### Test Modes

- Frequency sweep
- Strain sweep
- Static testing
- Characterise viscoelastic material properties
- Failure and fatigue testing
- Non-destructive testing
- Cycling between limits of force or displacement



#### Non-Linear Material Properties

The reaction of the sample as a function of both amplitude and frequency can be used to build a model of material properties that include both physical and chemical characteristics. Stiffness, elastic modulus and viscosity can all be expressed as complex quantities that incorporate non-linear behaviours.

#### Fatigue & Failure Testing

The effect of constant stress, strain or strain rate can be used to determine strength, toughness and evaluate modes of failure. With dynamic forces, the repetitive loading of a material can be used to calculate fatigue strength, fatigue life and the dependency on the form, amplitude and frequency of oscillation.

#### Non-Destructive Testing

The properties of a material component or system can also be analysed without causing any damage. In this way, discontinuities can be highlighted during inspection without impacting on the future usability of the sample.

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