



Prescott instruments

Dynamic Mechanical Analyser



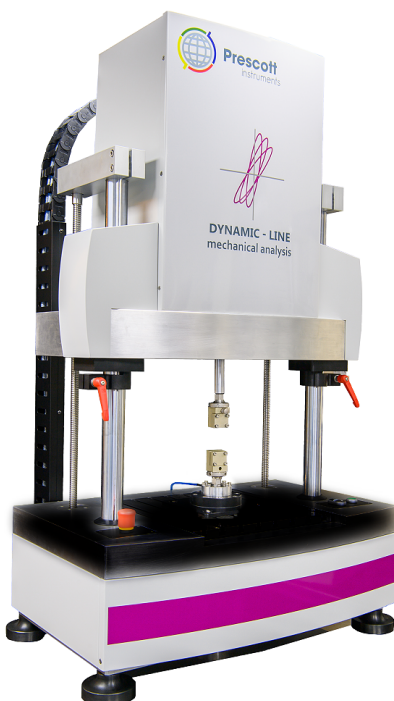
A Trusted Name in Material Testing

- 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.

Technical Specifications



	DL1	DL3
Minimum Force	0.0001 kN	0.0001 kN
Maximum Static Force	0.7 kN	1.75 kN
Maximum Dynamic Force	1.0 kN	2.5 kN
Frequency Range	0.001 Hz to 100Hz	0.001 Hz to 100Hz
Maximum Stroke Length	88 mm	88 mm
Displacement Resolution	0.001 mm	0.001 mm
Test Space Size (W x D x H)	300 x 300 x 300 mm	300 x 300 x 300 mm
Electrical Power	Single Phase, 15A	Single Phase, 15A
Weight	250 kg	300 kg
Dimensions (W x H)	900 x 1500 mm	900 x 1500 mm

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

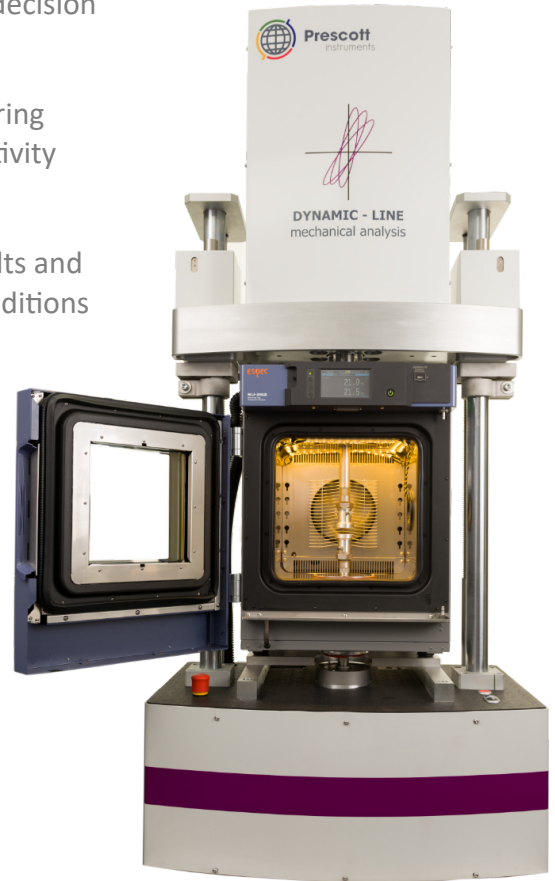
The reaction of the sample as a function of both amplitude and frequency can be used to build a model of material properties that include both physical and chemical characteristics. Stiffness, elastic modulus and viscosity can all be expressed as complex quantities that incorporate non-linear behaviours.

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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