



Prescott's **Rheoline Moving Die Rheometer (MDR)** has been designed to carry out tried and proven test specifications in accordance with international standards. Providing fast, accurate data and meeting the requirements of a modern testing laboratory, the Rheoline MDR is ideally suited to both the production environment and for use in the development of elastomeric compounds.

Moving Die technology is a well-proven process that can significantly reduce your traditional testing and analysis times. At the heart of the Rheoline system is a rotor-less biconical die assembly with an internal cavity of only 4.5cm³. The lower die oscillates at 1.67 Hz over amplitudes of 0.5°, 1.0°, or 3.0° whilst the top die remains fixed and accurately measures the reaction torque, producing precise, repeatable data in an extensive range of testing environments.

The digital electronics module and 16-bit PID algorithm apply quick, accurate temperature control with a variation of ± 0.03 °. This MDR is available with various options including automatic loading/unloading systems, a pressure transducer for measuring the axial load exerted by the sample, and variable die temperature while the test is in progress.

The Rheoline equipment is interfaced to a personal computer running Windows Software, and is designed to carry out tests in accordance with international standards.

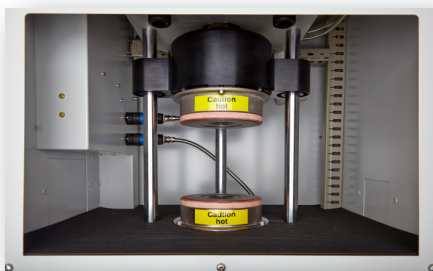
The test results are performed and displayed as plotted curves on a graph and the information can then be printed out as and when required, or stored on the computer's hard disk for reference. The flexible Labline software has no limit to the number of data points that can be selected or the number of tests that can be performed and displayed. Professional reports can also be produced with your own logos incorporated. These reports can then be printed, exported or sent by email.

Data Calculations:

- » Initial
- » Minimum
- » Maximum
- » Scorch Points
- » Percentage Cure Points
- » Reversion
- » Cure Rate
- » Delta Cure
- » Quality Control Pass/Fail

Application and information available:

- » Elastic Torque
- » Viscous Torque
- » Tangent delta
- » Cure Rate
- » Pressure in Cavity (optional)



Rheoline Moving Die Rheometer

Technical Specification:

Standards	ISO No. 6502 / ASTM D5289
Die Configuration	Rotor-less, Biconical, Sealed System
Oscillation Frequency	1.67 Hz
Oscillation Amplitude	0.5 ° (Std.), 1.0 °, 3.0 °
Temperature Range	Ambient to 250 °C
Temperature Control	3 term PID, control accuracy +/- 0.03 °C
Torque Range	0.001 to 250 dNm
Electrical	Single Phase 220/240V 50Hz 110V 60Hz 350 VA
Pneumatics	Filtered Air, Min: 0.41 Mpa 60 psi 4.14 Bar 4.2 kg/cm
Weight	200 kg
Dimensions	575 mm x 570 mm x 1280 mm (W x D x H)
Optional Extras	Programmable Temperature Zones Additional Oscillation Eccentric Pressure Transducer Automation Module (4/16 samples) Rheoline Volumetric Sample Cutter

Pass and fail tests automatically

Rheoline software has been developed to automatically pass or fail samples based on predetermined test limits for each of the compound types tested. The test limits can be calculated on results from your previous data, or with adjustments to suit your particular conditions.



Quality sample preparation

It is strongly recommended that your samples are prepared with our **Rheoline Volumetric Sample Cutter** which is available from Prescott Instruments Ltd. Please see our brochure for more information.



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