



Prescott instruments

Rheoline Multi-Function Rheometer (RPA)

A Trusted Name in Material Testing

- Prescott Instruments 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 **Multi-Function Rheometer (RPA)** is our most **innovative dynamic instrument**, combining the capabilities of a Moving Die Rheometer with the dynamic flexibility of a Dynamic Shear Rheometer.
- Its **precision, reliability and durability** make it an indispensable instrument for laboratory professionals worldwide.

Built to Last

- This **versatile instrument** provides vital analytical and **statistical data** to the finest detail.
- Our MFR is designed to deliver reliable results to the utmost accuracy, making this the **ultimate choice for any polymer specialists.**
- The temperature control of the dies **easily surpasses that of its rivals**, giving an impressive variation of $\pm 0.03^\circ$ from the set point.
- This dynamic instrument comes complete with an **Air Cooling System** as standard to assist the operation of a **Temperature Sweep.**
- Our signature Labline software suite allows **fantastic flexibility** and provides a wide range of test conditions with **unlimited test methods.**

Parameters Calculated:

- » Elastic Torque, S'
- » Viscous Torque, S''
- » Complex Torque, S^*
- » Pressure P
- » Loss Angle, δ
- » Storage Shear Modulus, G'
- » Loss Shear Modulus, G''
- » Complex Shear Modulus, G^*
- » Loss Factor, $\tan \delta$
- » Dynamic Complex Viscosity, η^*
- » Real Dynamic Viscosity, η'

Modes of Operation:

- » Frequency Sweep
- » Temperature Sweep
- » Strain Sweep
- » Standard MDR mode
- » Pre-set test specifications
- » Conditioning steps
- » Linked tests



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Technical Specification

Standards	ISO 6502 / ISO 13145 ASTM D5289 / ASTM D6048 / ASTM D6204 ASTM D6601 / ASTM D7605 DIN 53529
Die System	Biconical, Fully Sealed
Die Gap	0.45 mm nominal
Torque Device	Reaction transducer in upper platen
Closing System	Soft closing to reduce breakage of film and distortion of sample
Drive System	In line servo-motor and Aerotech digital controller
Calibration Device	Torsion spring
Oscillation Frequency	0.001 Hz to 50 Hz
Oscillation Amplitude	$\pm 0.001^\circ$ to 360°
Cooling Rate	Forced air: 20 °C/min
Temperature Range	Ambient to 250 °C
Temperature Control	3 term PID, control accuracy $\pm 0.03^\circ\text{C}$
Temperature Units	Celsius or Fahrenheit
Pressure Units	Lb/sq.in or Kg/sq.cm
Time Units	Min/Seconds or Minutes/Decimal
Torque Range	0.001 to 250 dNm
Torque Units	In/Lbs or 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	250 kg
Dimensions	575 mm x 570 mm x 1280 mm (W x D x H)
PC Specification	Pentium processor, Fully networkable
Operational Extras	Automation Module (4/16 samples) Rheoline Volumetric Sample Cutter

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