

# PREMIER™ RPA

## Rubber Process Analyzer

Measures dynamic properties of raw elastomers or mixed rubber before, during and/or after cure. Performs cure, temperature sweep, frequency sweep, and stress relaxation tests.

### Features

- Advanced Fourier Transform Rheology test, including long chain branching (LCB) determination
- Proprietary electronics produce stable measurable over a wide range of torque values
- NIST traceable standards ensure excellent reproducibility worldwide
- Pressure transducer standard to provide pressure measurements in addition to torque
- Extensive ability to organize data into reports and perform statistical analysis
- Sealed biconical dies
- Programmable auto data validation
- Measure dynamic properties of rubber before cure, during cure and after cure
- Operates using Enterprise software, a flexible LIMS software based on a SQL server database

### Performance

- *Dynamic Symmetry™* - a system that ensures dies remain parallel to reduce variation
- *Smart Alignment™* - a system that ensures excellent die cavity sealing for better repeatability
- Enhanced data sampling and processing using up to 64x faster data rate per cycle
- Up to 80 unique sub tests within a single test configuration
- Pre-strain setting for frequency and strain sweeps
- Improved sensitivity to mixing error and/or compound changes

### Options

- Sample handling (5, 10, 36, 112)
- Sample prep
- Wide assortment of films
- Multiple die selections
- Multiple languages

## Specifications

|                    |  |                    |  |
|--------------------|--|--------------------|--|
| Frequency:         | 0.1 to 3000 cpm (0.0016 to 50 Hz)  | Testing Standards: | Meets ASTM D5289, D6048, D6204, D6601, D7050, D7605, and D8059         |
| Temperature Range: | Ambient to 446°F (230°C)   | Report Export:     | Numerous formats including text and Microsoft Excel ©                  |
| Electrical:        | 100/110/120/130 VAC ± 10%, 60 ±3 Hz, 15 amp single phase. 200/220/240/260 VAC ± 10%, 50 ±3 Hz, 7.5 amp single phase. | Dimensions:        | Width: 22 in (56 cm)<br>Height: 48 in (122 cm)<br>Depth: 25 in (64 cm) |
| Max Ramp Rate:     | 1.8°F/sec (1°C/sec)  | Weight:            | Net 346 lbs (157 kg), gross 547 lbs (248 kg)                           |
| Max Cool Rate:     | 0.9°F/sec (0.5°C/sec)  | Air Pressure:      | 80 pi (5.6 kg/cm 2551 kPa) minimum                                     |
| Strain:            | ±0.07% to ±1255% (±0.005 to ±90 degrees)   | Calculated Data:   | G', G'', G*, J', J'', J*, S', S'', S*, tanδ, η', η'', and η*           |
| Measured Data:     | Torque, temperature, frequency, strain   | Data Storage:      | SQL database   |