



EKTRON TEK CO., LTD.



LEADING MANUFACTURER IN TESTING INDUSTRY



EKT-2003RPA-S

EKT-2003RPA Series

EKT-2003RPA-N

-Manual sample loading

EKT-2003RPA-S

-With 5pcs sample loading

EKT-2003AUTO

-With full automatic loading system



EKT-2003RPA-N
-Manual sample loading

EKT-2003RPA Series

Functions and Features

- The EKT-2003RPA can measure raw or mixed rubber polymer properties in before cure, during cure and post cure stages. The system is designed in accordance with international standard ASTM D5289, D6048, D6204, D6601, D7050 and D7605.
- The measuring devices provide curing, sweep and stress relaxation tests.
- The system offers excellent test sensitivity with better temperature stability and accuracy.
- The test data is highly repeatable and reproducible.



→ Faster Temperature Recovery

Faster temperature heat-up and stabilizing capabilities minimize the time of die temperature recovery, and ensure the tested rubber specimen is vulcanized under an ideal isothermal status.

- Directly heated dies shorten the pre-heat time.
- Quick die temperature recovery.
- Precise control and accuracy of the temperature is obtained by platinum resistance temperature sensors along with professional temperature control software.
- Temperature process control is easy to use.
- High efficiency heat conduction structures and temperature control components significantly shorten the time of die temperature recovery and ensure the stability of die temperature in each test.

Improved Torque Measuring System

Compared to traditional Rheometer, a high precision torque transducer is installed upon the upper die shaft of this EKT2003RPA Rubber Processing Analyzer in order to completely eliminate any resistance force caused from the moving mechanical structure to ensure and the torque measurement is the real reaction of the rubber compound.

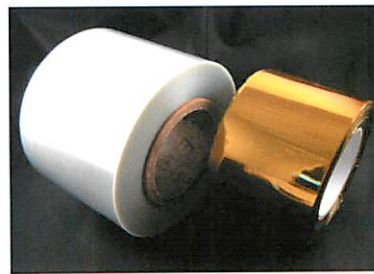
Friendly & Simplified Operation

Windows® operation system

Windows® system software offers easy learning and friendly operation environment. From the software help manual, the user can easily and quickly review the operation steps.

Easy specimen removal

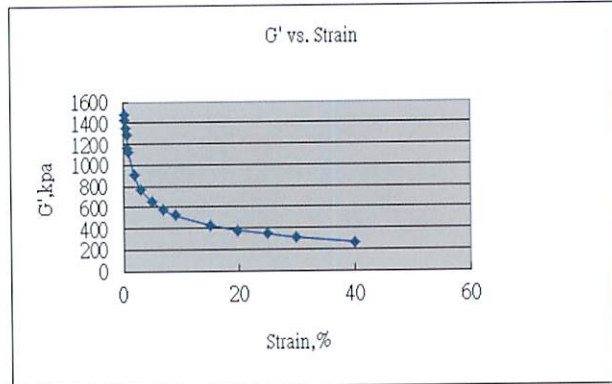
The new designed die cavity uses HDPE Polyester film to separate the test sample and dies from directly contacting, thus eliminating die contamination. It also enables the user to remove the tested sample more easily.





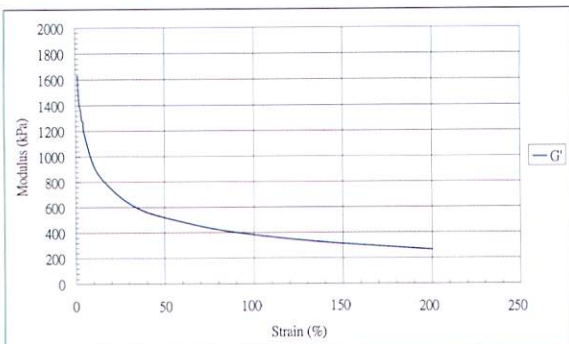
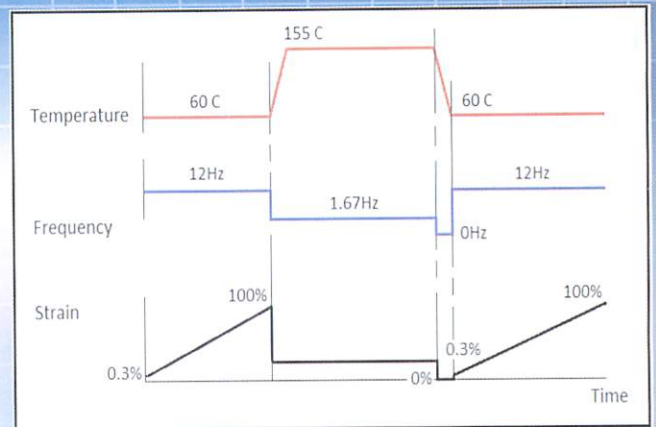
Variable Testing Parameters

1. Test Time
2. Temperature
3. Oscillating Frequency
4. Test Strain



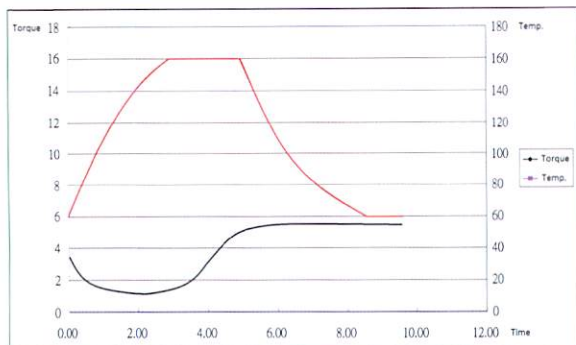
Programed Test Sequences

The EKT-2003RPA software enables the user to set a series of tests for a single sample to measure the rheological and viscoelastic properties of rubber compound before, during, and after cure.



Variable Strain

Variable strain is effective to predict raw natural rubber processing condition and also can give better statistical test sensitivity for differences in synthetic rubbers.



Variable Temperature

The temperature sweep is effective to study rheological differences of raw polymer and mixed compound; and also can be used to predict curing reactions under real molding procedures.

User-Friendly Operation System

Windows operation system software offers easy and friendly operation and interface for the user.



Windows Software System

1. All the setting data can be saved and reloaded.
2. Selectable Y-axis coordinates offer the user to display curves in one chart so as to observe the relationship between curves.
3. All the test results including data and curves could be saved for the resource of Statistical Process Control and for printing.
4. All the saved curves can be reloaded for comparison.
5. Data management function provides easy operations for export, copy, and cleaning.

One-Click Language Selection

Standard EKTRON operation software offers user to select between different languages through one-click button without quitting or closing the software.

Auto Range

During the test, if the readings are over the setting ranges, the auto range function will automatically enlarge the scales.

Auto-Calculation & Saving Data

By means of high speed and massive amount of data process capabilities, all the testing specifications can be preset and saved to reduce the operations before a test.

Auto-Calculation

During the test or at the end of the test, the computer can automatically calculate and save the test results. The desired data can then be selected and put into the editable report.

Saving Data

Large memory capacity is available for saving all the testing results and curves for later data analysis and review.

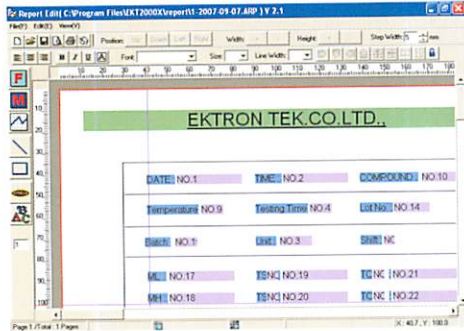
Curves and Data Retrieval

1. All the testing results such as the curves and data can be saved and retrieved for review and comparison.
2. Colors - of curves displayed on the screen can be selected.
3. Data view - By Moving the cursor on the testing curve, the related time and data value of each point will be automatically shown on the menu.
4. Zoom in or out from the curves to any scale during or after test.

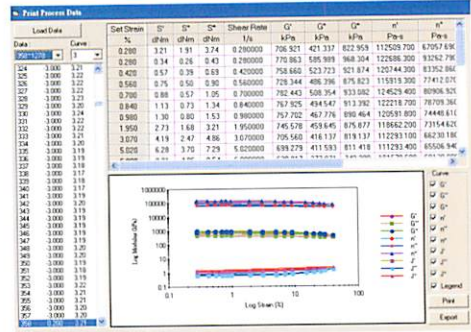


Software Features

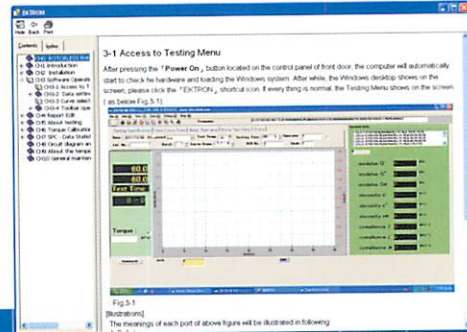
1. Friendly Windows operation system offers easy and friendly operation interface.
2. Automatic Data Processing - Data collection, processing and storage are carried out automatically by professional software.
3. Test results and curves can be saved and retrieved for review or analysis.



5. EKTRON software provides help manual for users to check the software operational details easily.



4. Easy for users to design an ideal test report that displays numbers, sketches or both in the same report.



Physical properties can be displayed as following:

MODEL	EKT-2003RPA-N	EKT-2003RPA-S	EKT-2003RPA-AUTO
Elastic Torque	√	√	√
Viscous Torque	√	√	√
Complex Torque	√	√	√
Loss Angle	√	√	√
Tan Delta	√	√	√
Elastic Modulus G'	√	√	√
Viscous Modulus G''	√	√	√
Complex Modulus G*	√	√	√
Dynamic Viscosity n'	√	√	√
Dynamic Complex Viscosity n*	√	√	√

Report Compiler

Easy operating report compiler provides the user to design the form and contents of test report, including inserting the company logo and any remarks.

Data Processing

1. All the conditions of testing, data and curves can be saved, printed and consulted.
2. SPC software including X-MR, -R, Histogram, Normal Distribution Charts enables users to analyze the test results.
3. All the testing data testing can be exported to the EXCEL software for advanced statistics and analyses.

SPC Statistics Software

Statistical Process Control software (SPC) automatically stores and analyzes the test results.

Quality Control

Quality control function offers the user to set the control limits at any specified point.

Calibration

By using the friendly calibration software, the torque calibration can be easily accomplished after installing the torque standard onto the instrument.



Optional Accessories

Automatic Sample Loading System

MODEL NO: EKT-2003RPA-AUTO

EKTRON offers its customers the optional choice of adding the "Automatic Sample Loading System" to their machine. Up to 100pcs of samples can be loaded. The system is fully automatic; requiring only to place the sample on the sample loading plate and the rest of the testing operation is automatic.



EKT-2003RPA-AUTO
-With full automatic loading system

Data Export and Network Software Connection

MODEL NO: EKT-2000NWSS

EKTRON also offers Network Software Connection System for customer to purchase as optional choice.

Volumetric Cutter

MODEL NO: EKT-2003EKVC

EKTRON also provides volumetric cutter for customer to purchase as optional accessories. Users can easily use this equipment to cut the sample piece in order to save time on sample preparation.



Specifications

01. Standards	ASTM D5289, D6204, D6601, D6048, D7050, D7605
02. Die Structure	Bi-Conical
03. Frequency Range	0.01 Hz to 50 Hz or up to 100Hz as optional purchasing
04. Strain Range	0.28% to 1250%
05. Measuring Data	Torque, Temperature, Frequency, Strain
06. Data Process	SQL
07. Calculated Data	G', G'', G*, S', S'', S*, Tan Delta, n', n'', n*, J', J'', J*
08. Torque Unit	Lbs-in, Kgf-m or dN-m
09. Temp. Control	Control by computer & PID Temp. Range : Ambient temperature + 5 ~ 230°C
10. Temp. Accuracy	Temp. error ± 0.3°C, Min. Resolution of temp. 0.1°C
11. Temp. Unit.	Celsius or Fahrenheit
12. Measurement Units	Torque: lb-in, kg-cm, dN-m Temperature: °C
13. Air Pressure	Filtered Air 5.6Kg/cm ² or 80PSI
14. Power Supply	220VAC or Optional as customer's request

Main product :

- RHEOMETER
 - Rubber Processing Analyzer
 - Moving Die (Foam Pressure) Rheometer
 - Moving Die Rheometer
 - Oscillating Disc Rheometer
- Tensile Tester
- Mooney Viscometer
- Plunger Tester
- Mixing Grader
- Vibration Simulator
- Flexometer
- Automatic Ozone Test Chamber
- Fatigue Failure Tester
- Demattia Flexing Fatigue Tester
- Low Temperature Retraction Tester
- Gas Permeability Tester



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