

OSC 997FU001 Moving Die Rheometer

Highly reliable instrument in solving customer's rheological problems which is designed in accordance with ASTM D5289 & ISO6502 international standards for evaluating the date of rubber vulcanization characteristics, curing time, cross-linking rate and tangent.



<Features>

1. Multiple test information

- For each test, more than 7 types of curves related viscoelastic properties could be measured.
- Test results: After each test, automatically calculate more than 120 bits of data and results.
- Elastic torque: such as ML, MH, MS1, MS2, MS50, MC90...etc.
Cure time: such as TS1, TS2, TC50, TC90, TC95...etc.
Cure rate: such as CRI (cure rate index), MCR(maximum cure rate)...etc.
Max. and min. values of each curve: such as $Tan\delta_{max}$, δ_{max} , S''_{max} ...etc.
Times related to specified points: such as $T@Tan\delta_{max}$, $T@MCR$...etc..

2. Quick temperature recovery

- Shortening the pre-heat time: Directly heated dies, precision platinum resistance temperature sensors, and plus the professional temperature control software shorten the time of preheat.
- Quick die temperature recovery - 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.
- The die temperatures shall recover to the setting value within 35 sec. after the test is started.

3. Processing and Saving data

Data collection, processing and saving are carried out automatically by the professional software.

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 test started.

- Auto-calculation - During the test or the end of test, the computer can automatically calculate and save the test results and user can select desired files and put it into the editable report.
- Saving Data - Large capacity of memory device is available for saving all the testing results and curves for the resources of data analysis and review.
- SPC software including X-MR, \bar{X} -R, Histogram, Normal Distribution Charts enables users analyze the test results of curing data such as M_L , M_H , T_S , T_C .
- All the data of testing can be imported to the EXCEL software to have advanced statistics and analyses.

4. Curves and data retrieve

- Colors - of curves displayed on the screen can be selected.
- Data view - Move the cursor of mouse to the testing curve, the related time and data value of that point will be automatically shown on the menu.
- Zoom the curve - The curves can be zoomed at any scale by the user during or after test.

5. Simplified Operation

- a. User-Friendly operation system - Windows OS software offers easy and friendly operation and interfacing between the instrument and user. The time to learn the operations of this instrument are very short.
- b. Easy specimen removal – Our new conical die cavity design enables the operator to remove the test specimens more easily.

6. Calibration

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

7. Quality Control

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

<Specifications>

Model	OSC 997FU 001
Standards	ASTM D5289, ISO 6502
Oscillating frequency	100 cycle/min. (1.66Hz)
Oscillating amplitude	$\pm 0.5^\circ$, $\pm 1.0^\circ$, $\pm 3.0^\circ$
Temperature	Computer assistance control Usable range from ambient to 200 High temperatures are available on customer's order
Measurement Units	Torque: lb-in, kg-cm, dN-m, Temperature:
Sample volume	About 4.5 cm ³
Graphic output	1) Elastic torque curve 2) Foam Pressure curve 3) Viscous torque curve 4) Tangent delta curve 5) Loss angle curve 6) Viscous-Elastic complex curve 7) Upper & lower dies temperature curves
Air pressure	About 5.0 kg/cm ² (or 0.5 Mpa)
Electrical	100VAC \pm 10%, 50/60 \pm 3Hz, 7 amp single phase
Approx. Dimensions	Main machinery: 85(D) x 62(W) x 135(H) cm Subsidiary-machinery: 65(D) x 80(W) x 80(H) cm (the data processing devices with a wooden desk)
Approx. Weights	Main machinery: 255 kg., Subsidiary machinery: 45 kg.

<Components>

1. One set of test machine

Including Computer, 17" Monitor, Color-Jet printer, Keyboard, Mouse, and a wooden table. The computer includes Core 2 duo, 2.0GHz, 16X DVD-DOM, 1600GB HDD, 1.44MB Floppy disk, 1GB DDR2, Windows XP operation software and professional interface card.

2. Data processing devices (contained by a wooden desk)

Including Computer, 17" Monitor, Color-Jet printer, Keyboard, Mouse, and a wooden table, Windows XP operation software and professional interface card.

3. One piece of standard torque calibrator

<Standard Accessories>

1. 2300 sheets of Polyester film
2. One pcs of Cooper brush
3. Hand tools for torque standard installation
4. Five pcs of spare fuse
5. 200 sheets of A4 paper
6. One pcs of cutting die