



## Product Description

### RT-101 Moving Die Rheometer



#### Equipment summary:

RT-101 Moving die rheometer is a widely used tester in rubber processing industry, rubber quality control and basic research rubber, For optimize formula of rubber provide accurate data, It can accurately measure the scorch time, rheometer time, sulfide index, the maximum and minimum torque and other parameters.

#### Main functions:

RT-101 Moving die rheometer used monolithic rotor control, which include: host, temperature measurement, temperature control, data acquisition and processing, sensors and electrical chains and other components. These measurements, temperature control circuit consists of a temperature control device, platinum resistance, heater composition, capable of automatic tracking power and ambient temperature changes, automatically correct PID parameters to achieve



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fast and accurate temperature control purposes. Data acquisition system and mechanical linkage to complete the rubber vulcanization process of force torch signal automatic detection, automatic real-time display of temperature and settings. After curing, automatic processing, automatic calculation, print vulcanization curve and process parameters. Show curing time, curing power Ju, also has a variety of audible alert.

RT-101 Moving die rheometer controlled by computer, the computer setting the parameters of the direct control of test parameters rheometer. Display real-vulcanization curve and temperature curve, store test results, different adjustable comparison of test results and in a different color.

## Features:

1. This instrument is really confined mold cavity, and the United States Alpha (formerly Monsanto) has done. Repeatability, and test data comparable with the Alpha. At the international leading position in the same industry.
- 2.,The instrument development platform based on large databases, temperature control devices using the software to directly control and collection and processing. Instrument to overcome the general curing temperature of the shortcomings of using temperature controller (accuracy poor). The technical leadership of international new trend.
3. This instrument has statistics, analysis, storage and comparison functions. Humanized design, easy to operate
4. Using imported high-precision sensors

## How it works:

The rubber sample into the mold cavity is almost entirely enclosed and maintained at test temperature, the mold cavity are of two parts, of which the lower part with a small linear reciprocating movement (swing oscillation), oscillatory shear specimen produced strain determination is the reaction torque of the mold cavity (force), this torque (force) depends on the shear modulus of rubber.

Curing test specimens after the start of the shear modulus increases, the computer machine real-time display and record the torque (force), when the torque (force) rose to a stable value or the maximum as well as return to the state, they get a torque ( force) and time curve, that is, curing



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curve (Figure 1), shape of the curve and test the temperature and plastic material characteristics.

## Applicable industry:

Widely used in rubber products industries.

## corresponding standard :

Accord with GB/T16584 《rubber- no rotor rheometer to measure the characteristics of vulcanized》  
ISO6502:1991 and ASTM D5289-95

## Technical parameter:

Model:	RT-101
Standard:	GB/T16584 ISO6502
Temperature:	room temperature to 200 Centigrade
Heating-up:	15 Centigrade/min
temperature fluctuation:	$\leq \pm 0.3$ Centigrade
temperature resolution :	0.1 Centigrade
torque range:	0-5N.M、 0-10N.M、 0-20N.M
torque resolution:	0.001NM
Power:	50HZ, $\sim 220V \pm 10\%$
Pressure:	$\approx 0.4$ Mpa
Air-pressure requirement:	0.5Mpa--0.65MPa (user prepare the dia 8 trachea)
Environment temperature :	10 Centigrade--20 Centigrade
Humidity range:	55--75%RH
Compressed air:	0.35-0.40Mpa
Swing frequency :	100r/min(about 1.67HZ)
Swing angle:	$\pm 0.5$ Centigrade , $\pm 1$ Centigrade , $\pm 3$ Centigrade
Printing:	Date、 time、 temperature、 vulcanization curve、 temperature curve、 ML、 MH、 ts1、 ts2、 t10、 t50、 Vc1、 Vc2.