

Name: Thermomechanical Analyzer

Model: TMA -1000



Outline

TMA-1000 Thermomechanical Analyzer is a high-tech instrument that measures the deformation of a substance under a non-oscillatory load under the control of programmed temperature. It is a new thermomechanical analysis instrument with three characteristics: miniaturization, intelligence and unit combination, which is called TMA for short internationally.

It can measure the expansion coefficient, shrinkage, melting point, creep and other parameters of materials, and is widely used in the testing of materials such as metals, ceramics, glass, polymers and low



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molecular organic compounds in laboratories such as scientific research institutions, universities and industrial and mining enterprises.

Instrument features:

- ☆ The furnace is small in size and light in weight; The heat capacity of the furnace is small, the heating and cooling rate is fast and the temperature control accuracy is high;
- ☆ The sampling process is fully intelligent, which can reflect the sample characteristics sensitively and accurately in real time;
- ☆ Equipped with a variety of working probes to accurately measure a variety of deformation physical parameters;
- ☆ All-round professional intelligent software package with data sampling, data processing and data output functions;
- ☆ The instrument is small in size, adopts electric lifting function and is convenient to operate;

Technical parameter

- 1、 TMA range: $\pm 2500\mu\text{m}$
- 2、 Temperature range: room temperature $\sim 1000^{\circ}\text{C}$
- 3、 Heating rate: $1 \sim 20^{\circ}\text{C}/\text{min}$
- 4、 Temperature resolution: 0.01°C
- 5、 Temperature accuracy: 0.1°C
- 6、 Temperature repeatability: 0.1°C
- 7、 TMA accuracy: 2%
- 8、 TMA resolution: $0.1\mu\text{m}$
- 9、 TMA resolution: $0.1\mu\text{m}$
- 10、 Temperature control mode: heating, constant temperature, cooling and circulating temperature control (full program automatic control).
- 11、 Curve scanning: heating scanning, constant temperature scanning and cooling scanning.
- 12、 Atmosphere control: the flowmeter automatically switches between two gases (rotor flowmeter).
- 13、 Gas pressure: 0.2Mpa
- 14、 Gas flow: $20\sim 200\text{ml}/\text{min}$
- 15、 Display mode: 24bit color, 7-inch LED touch screen display.



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- 16、 Data interface: USB interface with corresponding operating software.
- 17、 Parameter standard: equipped with standard calibrator, with one-button calibration function, users can calibrate the temperature by themselves.
- 18、 Working power supply: AC220V 50Hz/60Hz.

Parts list

| serial number | name | quantity | serial number | name | quantity |
|---------------|--|----------|---------------|-----------------------------------|----------|
| 1 | Main engine of thermomechanical detector | 1 set | 16 | Embedded thermocouple | 1 root |
| 2 | Thermomechanical detector controller | 1 set | 17 | Φ 5× 6 copper | 1 |
| 3 | Heating furnace (room temperature ~ 1000℃) | 1 set | 18 | Fluorocarbon oil (100 cc) | 1 bottle |
| 4 | Product specification | 1 copy | 19 | Syringe (50 cc) | 1 |
| 5 | Power cable, signal cable | 1 set | 20 | Pressure reducing valve connector | 2 |
| 6 | Expanded Shi Ying probe | 1 branch | 21 | Gas connector (M8X1) | 4. |
| 7 | Shi Ying probe with φ1 flat head penetration | 1 branch | 22 | weight | 1 set |
| 8 | R 0.5 penetration Shi Ying probe | 1 branch | 23 | Standard sample (indium, zinc) | 1g each. |
| 9 | R 1.5 penetration Shi Ying probe | 1 branch | 24 | Phillips screwdriver | 1 |
| 10 | Shi Ying outer sleeve | 1 branch | 25 | A screwdriver | 1 |
| 11 | Curved Shi Ying probe | 1 branch | 26 | handkerchief | 1 |
| 12 | Curved Shi Ying frame | 1 | 27 | Glass tube fuse (5A) | 4. |
| 13 | 1 mm sapphire | 1 tablet | 28 | softdog | 1 |
| 14 | Φ 4 mm polyethylene (3m) | 2 pieces | 29 | USB flash disk | 1 |



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|----|------------------------|----------|----|----------|---|
| 15 | Water rubber hose (2m) | 2 pieces | 30 | tweezers | 1 |
|----|------------------------|----------|----|----------|---|

After-sales description

1. The product is guaranteed for one year from the factory date (except for man-made failures).
2. The manufacturer provides users with lifelong technical services for products.
3. Software: free conversion between Chinese and English, free upgrade for life.
4. Home installation training
5. After-sales telephone number: 86 166017573347