# Lab Companion<sup>®</sup>



## Double-entry precision high-temperature oven OVEN-100-4C

#### **Custom solutions**

Double-entry precision high-temperature oven for industrial and mining enterprises, laboratories, scientific research units for drying, baking, melting wax, sterilization, etc. Four independent temperature control test boxes use four control systems to independently control the temperature system of each test box body, which facilitates the comparison between specimens. The equipment also has the characteristics of space saving and cost saving. This equipment is generally used in electronic products and materials, batteries, batteries, plastic products, metal materials, auto parts, aerospace, university scientific research, etc.



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### Technical characteristics

#### Performance:

Type: OVEN-100-4C Temperature range: RT~200  $^{\circ}$ C Temperature fluctuation degree: ± 0.5  $^{\circ}$ C Temperature deviation: ± 2.0  $^{\circ}$ C Temperature uniformity: 2  $^{\circ}$ C Temperature rise rate: the average temperature increase of the whole process is 3.5  $^{\circ}$ C / min,

under no load

The volume of a single box:100L

Dimensions (mm)	w	h	d
Use full	500	500	400
Over all	1530	1730	1110

### Features

1.Compound combination, four layers of independent temperature control test box adopts four control systems to independently control the temperature system of each test box, which facilitates the comparison between the specimens. The equipment also has the characteristics of space saving and cost saving.

2.Accurate temperature control, with high accuracy. Due to the unique air duct system design and electronic control system, the temperature of the whole test area can be kept highly uniform, which is much higher than similar products.

3.The room is set with a wide temperature range and is continuously adjustable. It can be set within room temperature ~300  $^\circ$ C. Products can be designed with higher temperatures upon special request.

4. The temperature in the test area is displayed in real time, accurate and clear.

5. The system protection functions are complete to ensure the safe, long-term and stable operation without failure.

6.Beautiful appearance, convenient construction, short construction period.

### operational principle

### air conditioning

1. Air regulation mode: forced ventilation internal circulation balance temperature regulation;

2. Air circulation device: built-in air conditioning device, circulating air duct, long axis axial flow fan;

3. Heating method: high-quality nickel-chromium alloy electric heater.

TT&C system

- 1. Temperature measurement: PT100 Platinum resistance;
- 2. Control device: use the intelligent digital temperature controller

Temperature control mode: automatic set two-bit PID control

Temperature setting mode: make the digital setting in the controller

Temperature display mode: the set temperature and the measured temperature are

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displayed in the controller

The product has a self-setting function to ensure that the temperature is constant at each set point

The product has a linear compensation function to avoid the inconvenience of display errors

3. The product is separately equipped with an over temperature protection instrument, which is used to set the upper limit alarm of the working temperature to prevent the damage caused to the test product and test box due to failure

4. Operation mode: constant operation



Display the interface

#### safety precautions

1. Set temperature of the over temperature dial = set temperature + 15  $^{\circ}$ C . When the temperature in the box exceeds the set temperature of the over temperature dial, the buzzer in the box alarms, the box is in standby state, and should be reused after manual reset.

2. Over temperature alarm of the controller: when the product in the box continues to heat up and exceeds the temperature set by the internal parameters of the controller, the buzzer in the box will alarm, which should be manually reset before reuse.

3. Anti-dry burning alarm: the temperature sensing package is located in the middle of the fan and the heating pipe, and the over temperature temperature can be adjusted to prevent the fan from not turning and the dry heating caused by the continuous heating of the heating pipe.

- 4. Heater short-circuit;
- 5. Drum-wind motor overload;
- 6. Air switch with leakage protection

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