# Lab Companion<sup>®</sup>



### Vacuum precision high-temperature oven OVEN-91V

#### **Custom solutions**

Vacuum precision high temperature oven is designed for drying heat sensitivity, easy to decompose and easy to oxidizing substances, can fill the heat gas into the interior, especially some complex ingredients can also be quickly drying. Widely used in scientific research, universities, electrician, materials, textile, electronics, chemical, food, agriculture, semiconductor, polymer materials, military, aviation, shipping, post and telecommunications, automobile, medical, packaging, deep sea, outdoor and other industries and enterprises and institutions.



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### Technical characteristics

#### Performance:

Type: OVEN-91V Temperature range: 40 to 200 $^{\circ}$ C Adjustment amplitude:  $\pm 0.5 ^{\circ}$ C (vacuum),  $\pm 1 ^{\circ}$ C (atmosphere) Arrival time of extreme temperature value: within 50 minutes ((set 200 $^{\circ}$ C: central temperature of tank is 40~200 $^{\circ}$ C until arrival time, in vacuum) Pressure range: 933~1 [10<sup>2</sup> Pa] Reaching pressure: 133Pa Drop time: within 7 points (atmospheric pressure 133Pa) Working volume: 91L Dimensions (mm) w

Dimensions (mm)	w	h	d
Use full	450	450	450
Over all	840	1550	850

#### Features

1. Excellent materials, convenient and practical, good sealing outside the box material are using high quality imported steel plate CNC machine tool processing molding, the shell surface for plastic treatment, more smooth, beautiful, the inner box material, made of stainless steel plate, protect the product durable, unique structure, durable, smooth operation.

2、 The box door is closed and elastic can be adjusted, the overall formed silicone rubber sealing ring, to ensure the high vacuum in the box, using no reaction door handle, easier to operate.

3、The circuit system side adopts gate opening, convenient maintenance and maintenance of high configuration, high efficiency and high speed.

4、 Far-infrared nickel-chromium alloy high-speed heating electric heater is adopted. High temperature is completely independent system, and does not affect low temperature test, high temperature test and alternating heat and humidity.

5、 The output power of temperature and humidity control is calculated by the

microcomputer to achieve the high precision and high efficiency.

Structure and working principleoperational 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

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Temperature setting mode: make the digital setting in the controller

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







Display the interface

4. Operation mode: constant operation

#### 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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