# **Lab Companion<sup>®</sup>**

# Double-entry dust-free high-temperature OVEN 180-2C

#### Custom solutions

Dust-free industrial ovens are mainly aimed at TP, LCD and other industries with high requirements for baking environment, and are widely used in material aging. Solid silver slurry. Ink-drying and other manufacturing processes. Can be designed and customized according to the actual production requirements of customers. The air in the box is closed and self-circulating, and is repeatedly filtered by the high temperature resistant high efficiency air filter (grade 100), so that the oven working room is in a dust-free state. Dust-free oven studio is of stainless steel construction. The temperature of the workplace is automatically controlled by the temperature controller, and there is an automatic constant temperature and time control device, and equipped with an over temperature automatic power failure and alarm circuit, reliable control and safe use.





#### Performance:

Type: OVEN-180-2C

Temperature range:RT+10 $^{\circ}$ C $\sim$ +150 $^{\circ}$ C

Temperature rate requirements: RT $^{\circ}$ C ---->150 $^{\circ}$ C40 minutes (nonlinear, empty load)

Temperature fluctuation: ≤±0.5°C Temperature deviation: ≤± 2.0°C Temperature uniformity: ≤2°C

Dust-free level: 100 Working volume: 200L

| Dimensions (mm) | w    | h    | d    |
|-----------------|------|------|------|
| Use full        | 500  | 600  | 500  |
| Over all        | 1100 | 2020 | 1420 |

#### **Features**

- 1. Full week argon welding, high temperature resistant silica gel breaking, SUS304 # stainless steel electric heating manufacturer, micro dust produced by the guard machine itself;
- 2. High temperature resistance, under the premise that the clean level of the working site reaches class 1000, the laboratory can effectively filter the micro dust and reach the clean level of class100;
- Multiplication combination, reduce the site occupation area, with high efficiency.

### 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

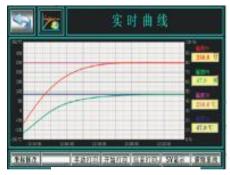
Temperature display mode: the set temperature and the measured temperature are displayed in the controller

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 overtemperature 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





Temperature profile

Display the interface

4. Operation mode: constant operation

## safety precautions

- 1. Over temperature protection setting: triple over temperature protection setting
- 2. Set temperature of the over temperature dial = set temperature + 15  $^{\circ}$ C . When the temperature in the box is out of control and 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.
- 3. 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 and then reused.
- 4. The third level of protection is controlled by the anti-dry burning protector. When the heating pipe is uncontrolled and continuously heated, the anti-dry burning protector senses the temperature and then transmits the signal to the controller for alarm.
- 5. Heater short-circuit;
- 6. Drum wind motor overload
- 7. The second layer of over temperature protection adopts the ST-140 controller with RS232 communication interface as the protection