

Stability Chamber



1. Main Technical Parameters

Model	SDJ-502
1.1 Test area size	600×550×700 mm (D×W×H)
1.2 Test area capacity	250 Liter
1.3 External size	1100×730×1730 mm (D×W×H)
1.4 Temperature range	-50 ~ 150 ℃
1.5 Temp. fluctuation	±0.5℃
1.6 Humidity range	20 ~ 98%R.H
1.7 Humidity fluctuation	±2% R.H
1.8 Fluorescent Illumination	6000~12000lux
1.9 Refrigerating mode	Air cooling
1.10 Controller	4.3" LCD-touch-screen programmable controller
1.11 Working mode	Fix and programmable

1.12 Test data record	(1) Test data is recorded and can be downloaded to USB (2) Printer on controlling panel. It prints test data
1.13 Remote control	User can monitor and control the chamber on computer via USB.
1.14 Power supply	220V, 5Kw

2. Heating System

2.1 Heating control part	SSR solid-state relay
2.2 Heater	Stainless steel heater and electric relay with over-heat protection

3. Humidifying/Dehumidifying System

3.1 Humidifier	Built-in boiler steam humidifier which automatically add water and give water-shortage alarm
3.2 Humidifying mode	Steam-humidifying
3.3 Dehumidifying mode	Evaporator coil dew-point temperature laminar flow contact
3.4 Water tank	Plastic water tank in drawer at the bottom

4. Chamber Structure

4.1 External material	SPCC cold-rolled electrostatic sprayed steel plate
4.2 Test area material	BAO STEEL SUS304 stainless steel plate
	
4.3 Insulation material	Superfine glass wool
4.4 Door	Single-door, flat handlebars
4.5 Door seal	Resistant-to-high-temperature silicone rubber
4.6 Door window	Automatically defrosting vacuum view window on door
4.7 Test area lamp	One proof-defrost light
4.8 Shelf	4 adjustable stainless-steel shelves
4.9 Port hole	Diameter $\Phi 50$ mm port hole on left side
4.10 Wheel	4 wheels with brakes
4.11 Water tank	Integrated water tank in the drawer at the bottom

5. Refrigerating System

5.1 Compressor	SE COP Compressor made in Germany
----------------	-----------------------------------

SECOP

5.2 Refrigerant	Environmentally friendly refrigerant R404a
5.3 Refrigerating mode	Air-cooling
5.4 Evaporator	Domestically-made evaporative condenser
5.5 Condenser	Domestically-made condenser
5.6 Other refrigerating part	expansion relief valve electromagnetic control valve drying filter pressure controller oil separator

6. Air Circulation System

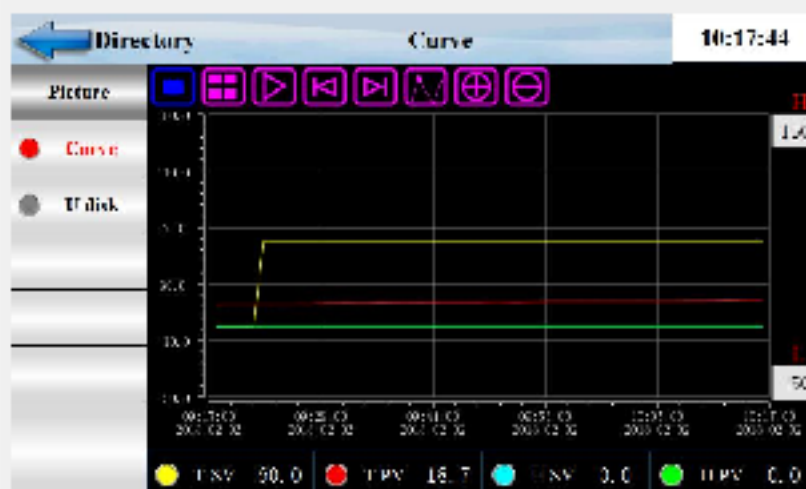
6.1 Blower	Stainless steel long-axial fan
6.2 Air circulation mode	Compulsory air circulation and Balance Temperature & Humidity Calculation (BTHC) which means when the refrigerating system is running, it controls the heater and humidity according to the calculated outcome gained from PID function. Eventually the balance will be reached.
6.3 Air circulation	Blown into test area from the bottom and blown out from fan

7. Controlling System (Controller)

7.1 Temperature & Humidity Controller

The temperature and humidity controller is **LCD-Touch-Screen** temperature and humidity controller. It has also the PID function of the controller can automatically control the temperature and humidity and correct the deviations. It can store the test data as well.

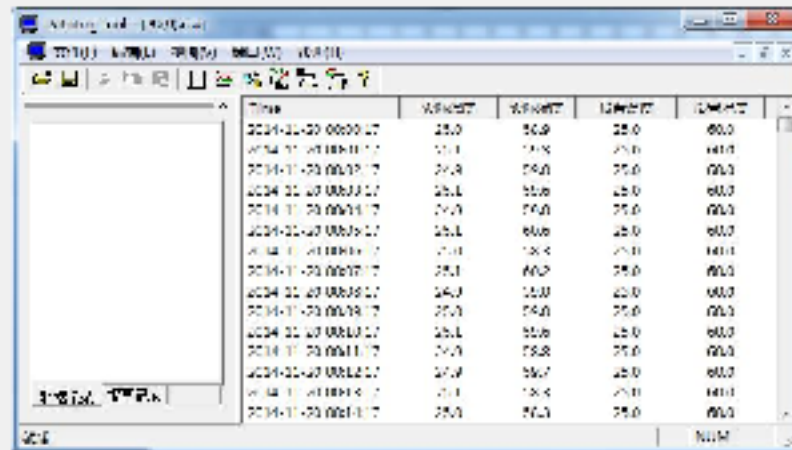




7.2 Controller language	English, Chinese and digits
7.3 Controller display	target temperature and humidity real temperature and humidity operating time alarm program curves
7.4 Setting accuracy	Temperature:0.1 °C Humidity:0.1%RH Time:1min
7.5 Operating mode	Constant and programmable
7.6 Program volume	Maximum 180 programs Each program has maximum 99 steps Each step has maximum 59 hours 59 minutes Each program can be linked or cycled together

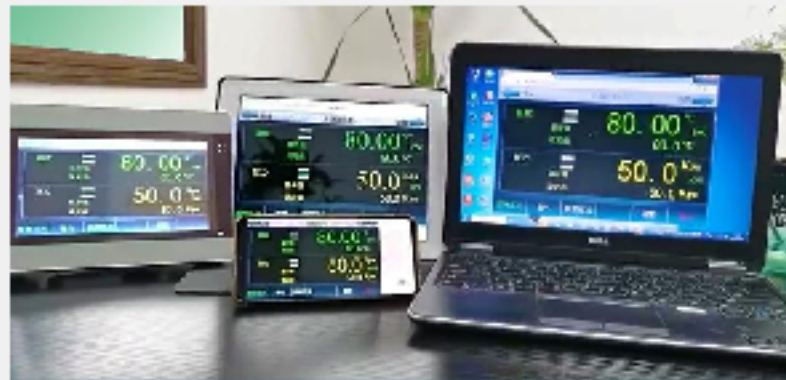
8. Recording System

8.1 Test data record Test data is continuously downloaded to **USB**. Test data includes target temperature, a actual temperature and the operating time.



Time	SP(°C)	SV(°C)	TP(°C)	PH(%)
2024-11-20 09:00:07	25.0	50.0	25.0	60.0
2024-11-20 09:01:07	25.1	50.0	25.0	60.0
2024-11-20 09:02:07	25.0	50.0	25.0	60.0
2024-11-20 09:03:07	25.1	50.0	25.0	60.0
2024-11-20 09:04:07	25.0	50.0	25.0	60.0
2024-11-20 09:05:07	25.1	50.0	25.0	60.0
2024-11-20 09:06:07	25.0	50.0	25.0	60.0
2024-11-20 09:07:07	25.1	50.0	25.0	60.0
2024-11-20 09:08:07	24.9	50.0	25.0	60.0
2024-11-20 09:09:07	25.0	50.0	25.0	60.0
2024-11-20 09:10:07	25.1	50.0	25.0	60.0
2024-11-20 09:11:07	25.0	50.0	25.0	60.0
2024-11-20 09:12:07	24.9	50.0	25.0	60.0
2024-11-20 09:13:07	25.1	50.0	25.0	60.0
2024-11-20 09:14:07	25.0	50.0	25.0	60.0

8.2 Remote control User can monitor control the chamber on computer.



8.3 Printer Printer on controlling panel. It prints test data. Printing interval is adjustable.

Time	Actual Temp.	Actual Humidity
20230101 9:00	25.2°C	60.0% R.H.
20230101 9:01	25.1°C	60.8% R.H.
20230101 9:02	25.1°C	61.0% R.H.
20230101 9:03	25.0°C	60.3% R.H.
20230101 9:04	25.2°C	59.4% R.H.
20230101 9:05	24.9°C	60.7% R.H.

9. Measuring System

9.1 Temperature sensor Pt100 temperature sensor

9.2 Humidity sensor Humidity transmitter

9.3 Other controlling parts AC contactor,
relay,

breaker;

10. Safety device

- (1) Over-heat protection
- (2) Over-load of fan protection
- (3) Over-load of compressor protection
- (4) Short-circuit protection
- (5) Ground protection
- (6) Water-shortage alarm

11. Operation Ambient Condition

11.1 Power supply	220V±22V,1P
11.2 Ambient temperature	<28℃