Benchtop Climate Chamber

1. Main Technical Parameters

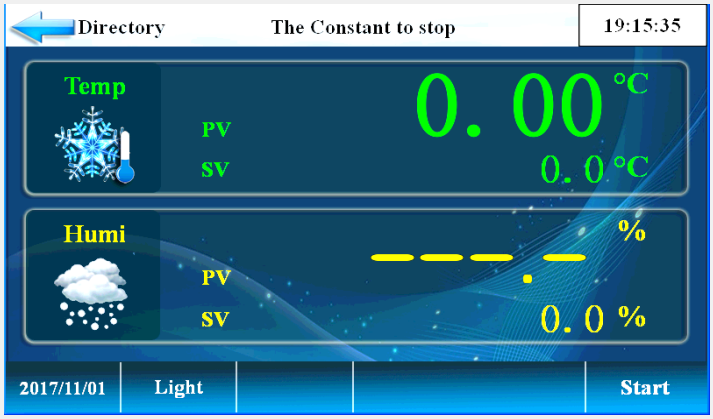
CANDEN MODEL NO:	HCS3
1.1 Inner Size	15"×20"x20" (D×W×H)
1.2 Inner Capacity	3 cu.ft / 100 Liter
1.3 External Size	31.5"×30"×39" (D×W×H)
1.4 Temperature Range	-25 ～ 100℃
1.5 Temperature Fluctuation	±0.3℃
1.6 Temp. Setting Accuracy	0.1℃
1.7 Humidity Range	10 ～ 98%R.H
1.8 Humidity Fluctuation	±2% R.H
1.9 Humidity Setting Accuracy	0.1% R.H
1.10 Controller	4.3” LCD-touch-screen controller
1.11 Operation Mode	Fix & Programmable

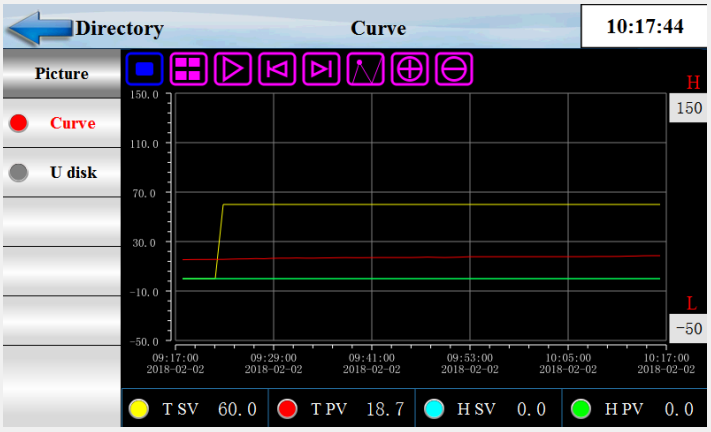
1.12 Test data record	Test data is stored in controller and can be downloaded to USB
1.13 Remote control	User can monitor and control the chamber on computer
1.14 Power supply	208~230V, 1P, 50Hz, 2Kw

2. Controlling System (Controller)

2.1 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.



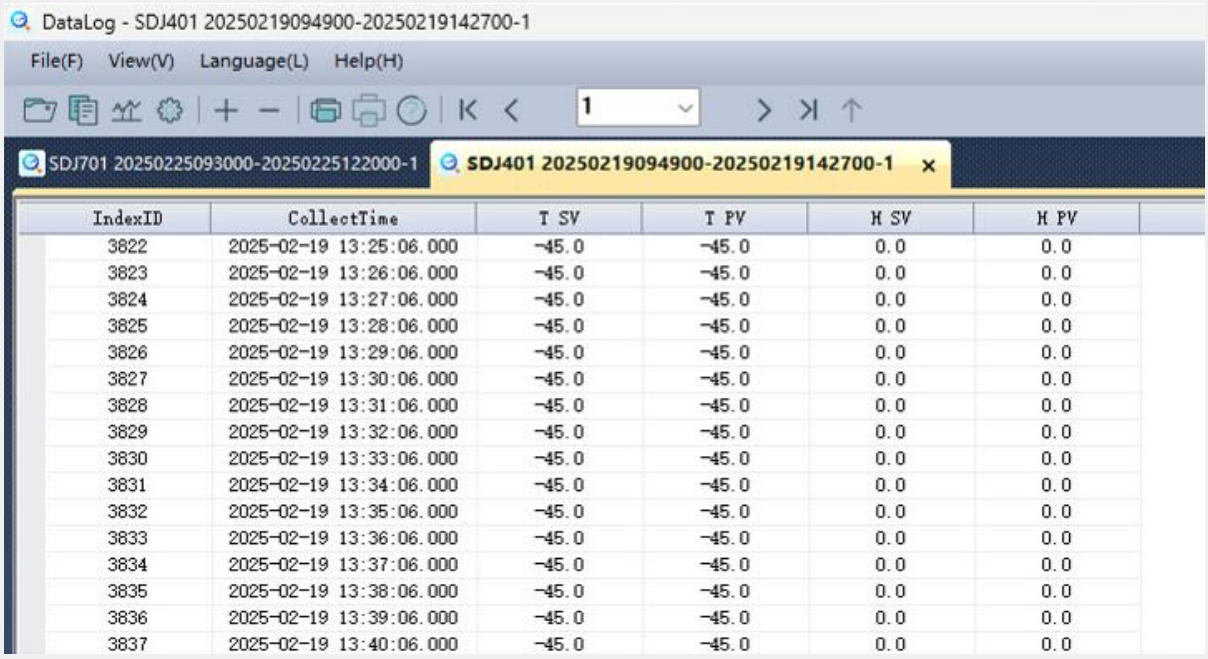


2.2 Controller Language	**English, Chinese and digits**
2.3 Display of controller	target temperature and humidity real temperature and humidity operating time

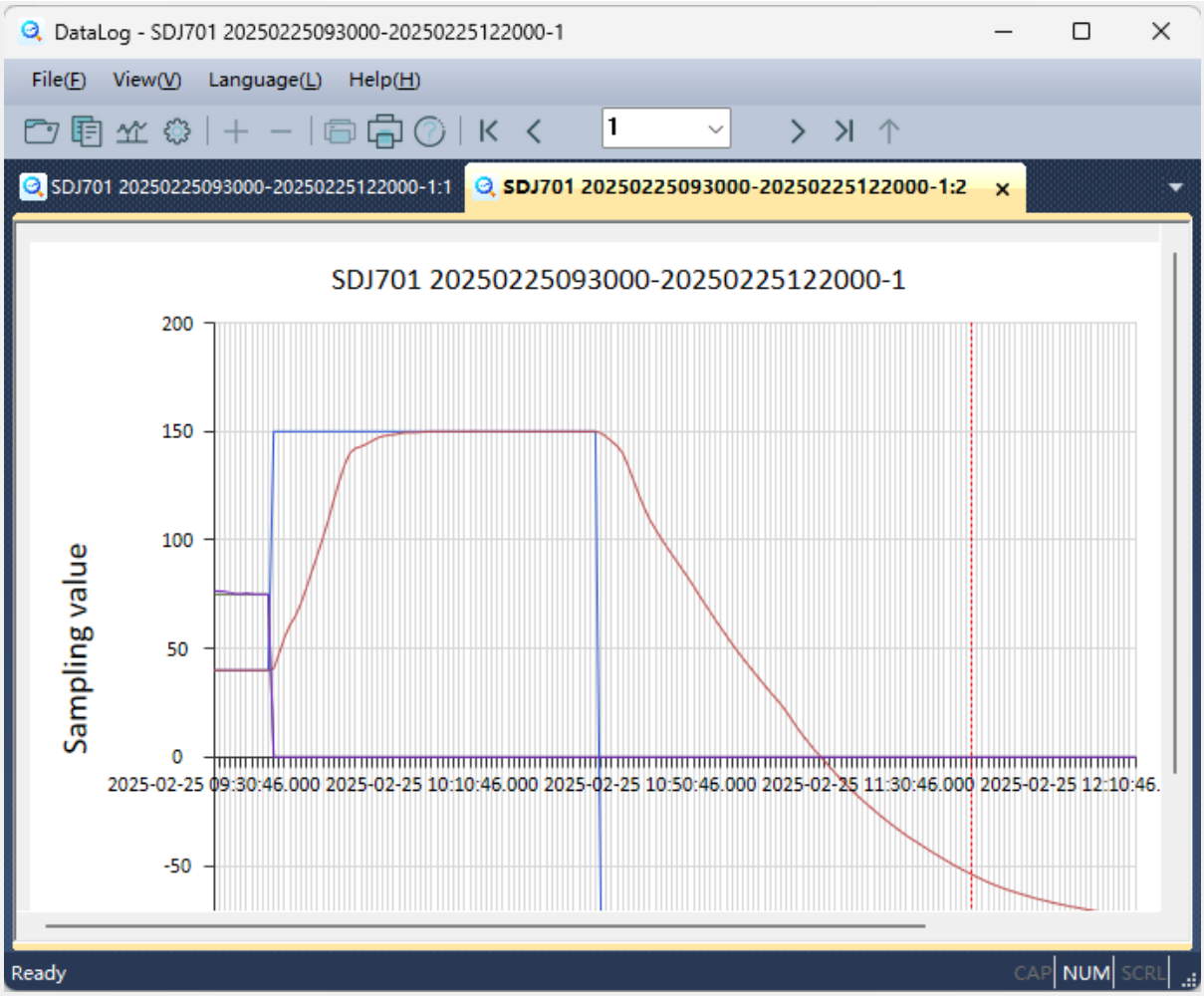
	alarm program curves ……
2.4 Setting Accuracy	Temperature:0.1℃ Humidity:0.1%RH Time:1min
2.5 Operating mode	**Constant and programmable**
2.6 Program Volume	Maximum 100 programs Each program has maximum 100 steps, each step has maximum 30000 hours Each program can be linked or cycled together
2.7 Temperature sensor	Pt100 temperature sensor
2.8 Humidity sensor	Humidity transmitter

3. Recording System

The test data is recorded in controller. It can be viewed on controller and can be downloaded to USB



IndexID	CollectTime	T SV	T PV	H SV	H PV
3822	2025-02-19 13:25:06.000	-45.0	-45.0	0.0	0.0
3823	2025-02-19 13:26:06.000	-45.0	-45.0	0.0	0.0
3824	2025-02-19 13:27:06.000	-45.0	-45.0	0.0	0.0
3825	2025-02-19 13:28:06.000	-45.0	-45.0	0.0	0.0
3826	2025-02-19 13:29:06.000	-45.0	-45.0	0.0	0.0
3827	2025-02-19 13:30:06.000	-45.0	-45.0	0.0	0.0
3828	2025-02-19 13:31:06.000	-45.0	-45.0	0.0	0.0
3829	2025-02-19 13:32:06.000	-45.0	-45.0	0.0	0.0
3830	2025-02-19 13:33:06.000	-45.0	-45.0	0.0	0.0
3831	2025-02-19 13:34:06.000	-45.0	-45.0	0.0	0.0
3832	2025-02-19 13:35:06.000	-45.0	-45.0	0.0	0.0
3833	2025-02-19 13:36:06.000	-45.0	-45.0	0.0	0.0
3834	2025-02-19 13:37:06.000	-45.0	-45.0	0.0	0.0
3835	2025-02-19 13:38:06.000	-45.0	-45.0	0.0	0.0
3836	2025-02-19 13:39:06.000	-45.0	-45.0	0.0	0.0
3837	2025-02-19 13:40:06.000	-45.0	-45.0	0.0	0.0



User can monitor and control the chamber on computer and mobile phone

4. Heating System	
4.1 Heating controlling part	SSR solid-sate relay
4.2 Heater	Stainless steel heater, and electric relay with over-heat protection

5. Humidifying/Dehumidifying System	
5.1 Humidifier	Built-in boiler steam humidifier which automatically add water and give water-shortage alarm
5.2 Humidifying mode	Steam-humidifying
5.3 Dehumidifying mode	Evaporator coil dew-point temperature laminar flow contact
5.4 Water tank	Plastic water tank in drawer at the bottom

6. Chamber Structure	
6.1 External material	SPCC cold-rolled electrostatic sprayed steel plate
6.2 Test area material	*BAO STEEL* SUS304 stainless steel plate
6.3 Insulation material	Superfine glass wool
6.4 Door	Single-door, flat handlebars
6.5 Door seal	Resistant-to-high-temperature silicone rubber
6.6 Door window	An automatically defrosting vacuum view window
6.8 Test area lamp	One proof-defrost light
6.9 Shelf	2 adjustable stainless steel shelves
6.10 Port hole	Φ50 mm port hole on left side
6.12 Water tank	Integrated water tank in the drawer at the bottom

7. Cooling System	
7.1 Compressor	Totally-closed hermetic compressor made in E.U.
7.2 Refrigerant	Environmentally friendly refrigerant
7.3 Cooling mode	Air-cooling

7.4 Evaporator	Domestically-made evaporative condenser
7.5 Condenser	Domestically-made condenser
7.6 Other cooling parts	expansion relief valve electromagnetic control valve drying filter

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

9. Safety device
(1) Over-heat protection
(2) Blower over- load protection
(3) Compressor over-load protection
(4) Heater short-circuits protection
(5) Blower short-circuits protection
(6) Water-shortage alarm

10. Operation Ambient Condition	
10.1 Power supply	208~230V, 1P, 50Hz, 2Kw
10.2 Ambient temperature	＜29℃