Programmable Environmental Chamber

1. Main Technical Parameters

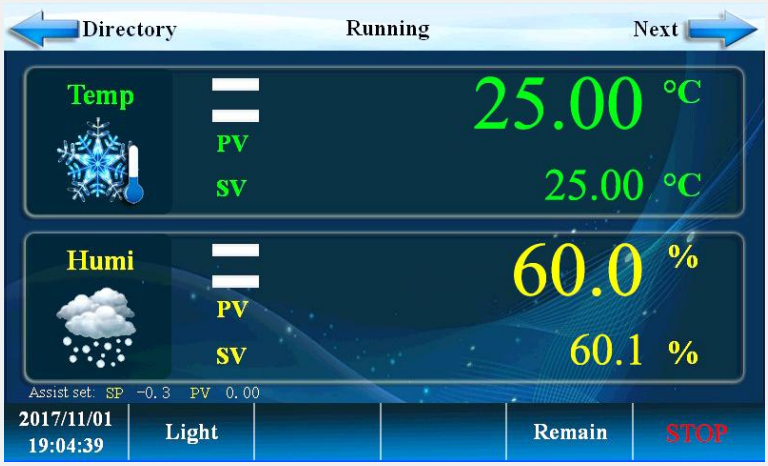
Model	HCS30
1.1 Test area size	35" ×33"×51" (D×W×H)
1.2 Test area capacity	1000 Liter/ 35 CU.FT
1.2 External size	51" × 38"× 176" (D×W×H)
1.3 Temperature range	-25 ～ 120℃
1.4 Temperature fluctuation	±0.3℃
1.5 Temp. setting accuracy	0.1℃
1.6 Humidity range	20 ～ 98%R.H
1.7 Humidity fluctuation	±2% R.H
1.8 Humidity setting accuracy	0.1% R.H
1.9 Controller	4.3'' LCD-touch-screen controller with PID digital thermostat
1.10 Operation mode	Fix & Programmable

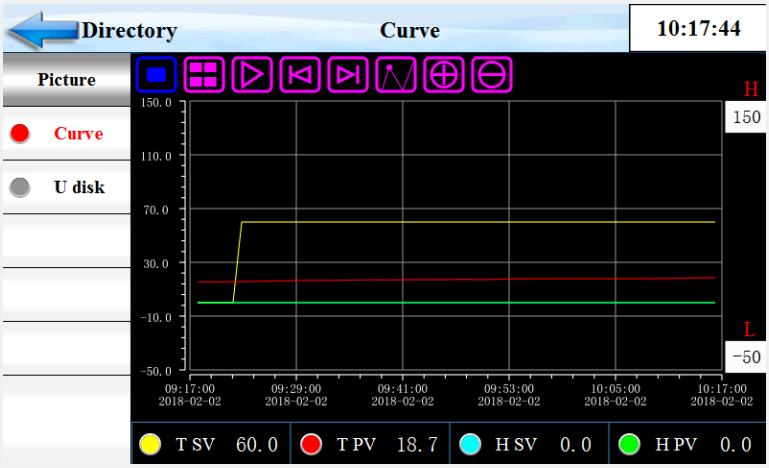
1.11 Test data record	Test data recorded in controller and can be downloaded to USB
1.12 Remote control	User can monitor and control the chamber on computer
1.13 Power supply	110~120V, 1P, 4.5Kw

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.



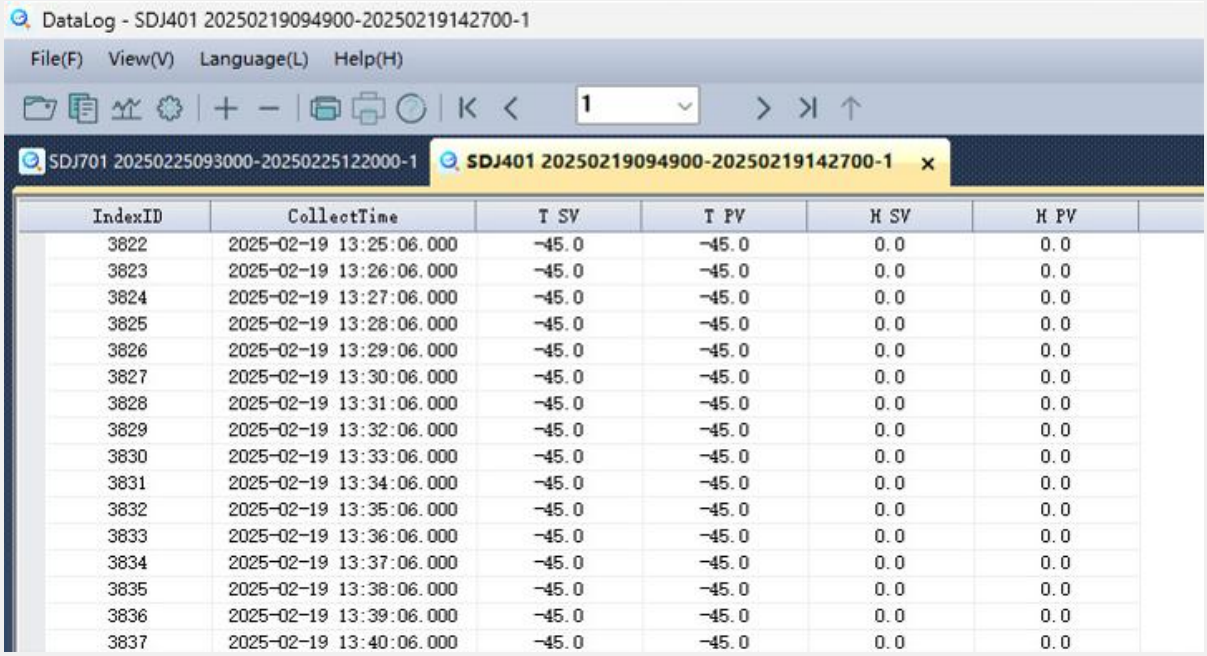


2.2 Controller language	**English, Chinese and digits**

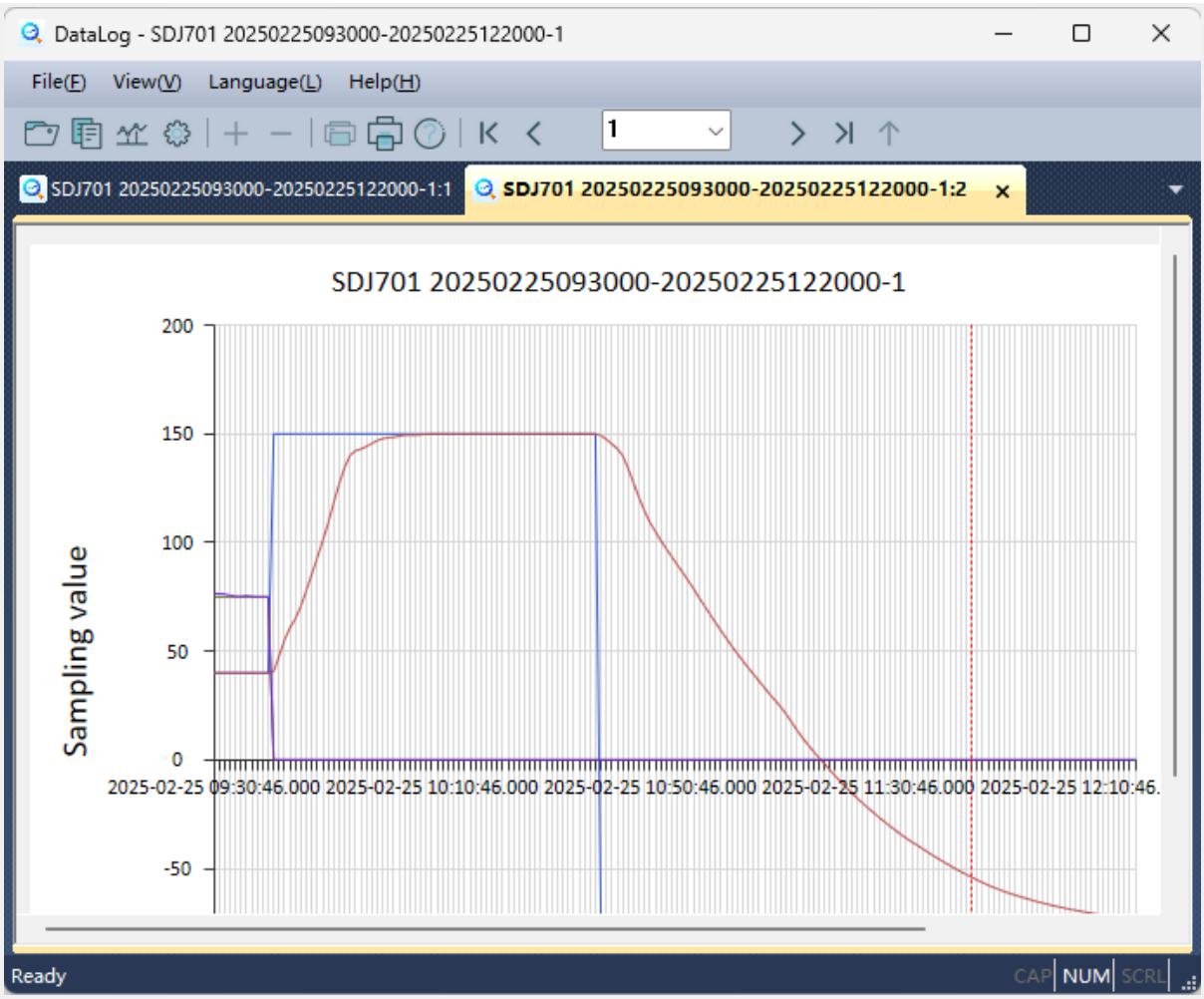
2.3 Controller display	target temperature and humidity real temperature and humidity operating time alarm program curves ……
2.4 Setting accuracy	Temperature:0.1℃ Humidity:0.1%RH Time:1min
2.5 Operating mode	**Constant and programmable**
2.6 Program volume	Maximum 100 programs Each program has maximum 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
2.9 Other controlling parts	AC contactor, Relay, breaker …… SIEMENS OMRON

3. Recording & Remote Control

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 or mobile phone

4. Heating System	
4.1 Heating control part	SSR solid-sate relay
4.2 Heater	Stainless steel heater 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	Electrostatically painted stainless steel
6.2 Test area material	*BAO STEEL* SUS304 stainless steel plate
6.3 Insulation material	Superfine glass wool
6.4 Door	A single out door and an inner glass door
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
6.11 Wheel	4 wheels with brakes
6.12 Water tank	Integrated water tank in the drawer at the bottom

7. Refrigerating System	
7.1 Compressor	Totally-closed hermetic compressor made in E.U.
7.2 Refrigerant	environmentally friendly refrigerant
7.3 Refrigerating Mode	Air-cooling
7.4 Evaporator	Domestically-made evaporative condenser
7.5 Condenser	Domestically-made condenser
7.6 Other refrigerating 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 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.
8.3 Air circulation	Blown into test area from the bottom and blown out from fan

9. Measuring System	
9.1 Temperature sensor	Pt100 temperature sensor
9.2 Humidity sensor	Humidity transmitter

10. Sound and Visual Alarm System
(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	110~120V, 1P
11.2 Ambient temperature	5 ～ 30℃
11.3 Ambient humidity	≤90%R.H

Note: Canden is distributor for this model. Model is manufactured in china.