

Technical Specifications

Item Description	100 L temperature and humidity chamber
Power supply	220V $\pm 10\%$, 50 HZ, 7.5KW
Model No.	RS-TH-100
Inner chamber size (mm)	W 400 * H 500* D 500
Exterior chamber size (mm)	W 600 * H 1400 * D 1300
Temp. range	- 70 $^{\circ}\text{C}$ \sim +180 $^{\circ}\text{C}$
Temp.& humidity fluctuation	$\leq \pm 0.5^{\circ}\text{C}$, $\leq \pm 2\%\text{R.H.}$
Temp. & Humidity Uniformity	$\leq \pm 2^{\circ}\text{C}$, $\pm 3.0\% \text{ RH}$ (humidity $> 75\%\text{RH}$) (no-load) $\pm 5.0\% \text{ RH}$ (humidity $\leq 75\%\text{RH}$) (no-load)
Humidity range	20%RH \sim 98 %RH
Indication resolution	0.01 $^{\circ}\text{C}$, 0.1 %RH
Heat up & Cool down time	Heating up: Average 3 \sim 5 $^{\circ}\text{C}$ / minute.(no-load) Cooling down: Average 0.7 \sim 1 $^{\circ}\text{C}$ /minute. (no-load)
Material	Inner chamber: SUS#304 Stainless steel Exterior structure: Galvanized sheet plain steel +Powder coating process
Temperature and humidity control range chart	<p>The chart displays the operational range for temperature and relative humidity. The x-axis represents Temperature in $^{\circ}\text{C}$ (0 to 100), and the y-axis represents Relative humidity in %RH (0 to 100). The shaded region indicates the controlled environment, with a constant humidity of 95%RH at 25$^{\circ}\text{C}$ and a maximum of 98%RH at higher temperatures. The bottom boundary shows a decrease in humidity as temperature increases from 20$^{\circ}\text{C}$ to 85$^{\circ}\text{C}$.</p>

Accessories	<ul style="list-style-type: none"> (1) Test Hole * 1pcs OD: 50mm (2) Window viewing light *1pcs (3) Multipane view window ; *1pcs. (4) Adjustable Loading shelves: 2pcs (each shelf can bear 25kg) (5)Evaporator pressure control valve-Controls the inside of the box from freezing
Refrigeration and heating system	<ul style="list-style-type: none"> (1)Original imported “Tecumseh ” high efficiency compressor (2)Air cooling condenser (3)Fin-tube heater (4)Original imported solenoid valves (5)Inner spiral K-type refrigerant copper tube (5) U-Type finned electro-thermal tube (6) Heating & cooling systems separated (8)Double stage refrigerating system
Humidifying & dehumidifying system	<ul style="list-style-type: none"> (1)Electric & byte type humidifying system (2)Stainless steel humidifying barrel with view window for water level (3)ADP dehumidifying way (4)Over-temperature and overflow protection units (5)Humidifying & dehumidifying systems separated
Circling &drain system	<ul style="list-style-type: none"> (1)Centrifugal fan & imported motor (2)Reverse uniflow (air flow direction) (3)Flow-throws wind (4)Drain system uses swirl type outlet and U-trap deposition unit
	<ul style="list-style-type: none"> (1) Adopt the original imported 7 inch microcomputer colour LCD display touch screen direct key type, wide viewing angle of Chinese and English. (2) High contrast function of temperature and humidity can be programmed at the same time, with 120 groups of programs 12,000 times memory, each section 99Hour59Min. (3) It can be set up in any number of segments and has multiple PID control functions. (4) Accuracy: Temperature $\pm 0.1^{\circ}\text{C}$ + 1digit, humidity $\pm 1\%\text{R.H}$ + 1digit; (5) Resolution: Temperature $\pm 0.01^{\circ}\text{C}$, Humidity $\pm 0.1\%\text{R.H}$; Temperature slope: 0.1 to 9.9 can be set; (6) With upper and lower limit standby and alarm function; (7) Temperature and humidity in force signal dry and wet bulb PT100x2; (8) 9 groups of P.I.D control parameters setting, P.I.D automatic calculation; (9) Automatic wet and dry bulb correction. (10) Colour-coded face-to-face, no key input, direct touch screen options; (11) Direct display of set (SV) and actual (PV) temperature and humidity values;

Programable micro-computer LCD touch controller	<ul style="list-style-type: none"> (12) Display of current programme number, number of segments, remaining time and number of cycles; (13) Temperature and humidity program setting values are displayed as graphical curves, with real-time display of the program curve execution function; (14) Separate program editing screen, each page can input at least 5 sections of temperature and humidity and time; (15) Chinese and English can be switched at will; fault prompt screen display; screen can be adjusted for backlight (16) Screen protection function can be timed, TIMER or manually switched off. (17) Program groups available: max. 120 PATTEN / memory capacity available: 12,000 SEGMENTS. (18) Repeatable commands: up to 32,000 times per command. (19) Program creation is dialog-based, with functions for editing, clearing and inserting. (20) SEGMENTS time setting 0 to 99Hour59Min. (21) Programmable timing control module x 2 groups. (22) Program memory for power failure and automatic start-up and continuation of program execution after power recovery. (23) RS-232 communication interface / USB interface function. (24) Real-time graphical display of the program execution. (25) Automatic adjustment of the freezing capacity, appointment start and shutdown, date and time adjustment.
Operating environment	<div style="display: flex; justify-content: space-between;"> (1) Ambient temperature: +25℃ (2) RH≤85%. </div>
Safety protection	<ul style="list-style-type: none"> (1) Non fuse protection switch (2) Overheat alarm protection (3) Compressor overload protection (4) Phase sequence protection (5) Motor over-current protection