

## Temperature and Humidity Test Chamber | STH Series



### Constant Temperature & Humidity Test Chamber

The Constant Temperature and Humidity Test Chamber is designed to evaluate the moisture resistance and environmental adaptability of electrical and electronic products, components, and materials. It simulates a wide range of temperature and humidity conditions, making it suitable for storage, transportation, and performance testing in both high and low temperature environments.

Equipped with an independent control system and a user-friendly touchscreen interface, the chamber delivers precise, reliable, and intelligent operation for laboratory and industrial applications.



Test Hole



Distribution Board



Power Switch  
Over Temperature Protection



Refrigeration Uni

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### Key Features

- User-friendly operation – Large colour LCD touchscreen for intuitive control; operating parameters can be easily set, saved, and recalled.
- Energy-efficient design – Advanced refrigeration and dehumidification system reduces power consumption by 30–45% compared to conventional systems.
- Enhanced visibility – Wide observation window and internal lighting for convenient monitoring of specimens.
- Data management & connectivity – Remote monitoring via LAN or USB connection; supports data logging with graphical display and Excel export.
- Customisable options – Available in standard models or tailored designs to meet specific test requirements.

### Advanced Programmable Controller

- Industrial-grade touchscreen (7" or 10.1") with high refresh rate for clear display.
- Simple workflow – All operations can be completed in just three steps.
- High precision & stability – Proprietary control algorithm with advanced acquisition module ensures accurate performance.
- Smart energy management – Low-power refrigeration system with adaptive algorithms maintains internal balance without relying on energy-intensive heating.
- Custom control platform – Independently developed system allows flexibility and bespoke solutions to meet unique testing needs.



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### Specifications

Model		STH-100	STH-150	STH-225	STH-416	STH-1000
Code#		221-501	221-511	221-521	221-531	221-541
Interior Dimensions (W*H*D) mm		500*500*400	500*600*500	500*750*600	700*850*700	1000*1000*1000
Internal Volume (L)		100	150	225	416	1000
Exterior Dimensions (mm)		The external box size is subject to the quotation				
Temperature Range (optional)		(-40°C/-50°C/-60°C/-70°C~+150°C optional) can be customized ~+180°C				
Humidity Range		10% to 98% RH (humidity working range +10°C to 90°C) Customizable low humidity range of 5% to 98% RH				
Temperature Fluctuation		±0.3°C				
Temperature Deviation		±2°C				
Humidity Deviation		-3~+2%R.H (above 75%R.H), ±5%R. H (below 75%R.H)				
Heating Time		About 3°C/min (non-standard customization is available at 5°C, 10°C, 15°C/min)				
Cooling Time		About 1°C/min (non-standard customization is available at 5°C, 10°C, 15°C/min)				
Materials	Case Material	Cold-rolled steel plate + paint treatment (SUS#304 stainless steel, optional)				
	Liner Material	SUS#304 stainless steel				
	Thermal insulation material	Rigid polyurethane foam				
Freezing System		Well-known brand compressor				
Protective Device		No fuse switch, compressor overpressure, overheating protection, overcurrent protection, overtemperature protection, overload protection, dry burning protection, water shortage protection, etc.				
Power Supply		AC240V/415V, AC 3 phase 50/60HZ				
Standard Accessories		1 test hole, 2 storage racks, 1 operation manual				