



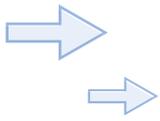
# BAT-TS

King Son BAT-TS Environmental Test Chamber  
for Secondary Lithium-Ion Batteries

ADVANCED  
SERIES

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# King Son BAT-TS Environmental Test Chamber for Secondary Lithium-Ion Batteries

King Son BAT-TS Environmental Test Chamber for Secondary Lithium-Ion Batteries is designed, built, and constructed according to specific testing standard requirements, capable to test small lithium-ion battery cells, battery modules and large battery packs.

Charging and discharging tests of batteries, such as lithium-ion batteries, are important tests to evaluate the life of batteries. During the test, there is a possibility of gas leakage from the battery, ignition, smoking, or destruction.

King Son BAT-TS Environmental Test Chamber is incorporated with safety features for reliability testing and abuse testing of batteries, tailored to meet the various hazard levels of EUCAR (European Council for Automotive R&D) safety requirements.

## BAT-TS Environmental Test Chamber Premium class

King Son LabTech Color Touch Panel Controller



King Son LabTech Color Touch Panel Controller



## BAT-TS Environmental Test Chamber Standard class

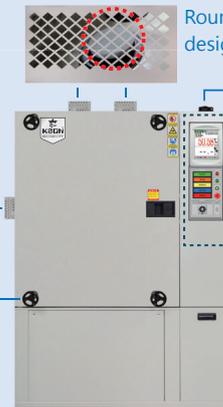


Round type hole with explosion-proof design at the top of the chamber

Testing hole with explosion-proof design

Door locker with explosion-proof design

Suction and exhaust air with safety control design

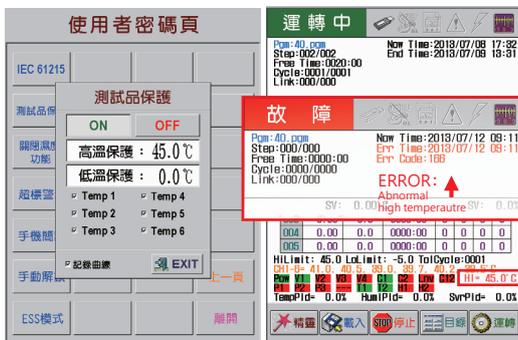


## Premium class:

### 1 6 Channel High Temperature Relay to protect and detect the temperature of the specimen (DUT, Device Under Test)

※ Abnormal high temperature detection

1. Abnormal shutdown
2. Stop charging and discharging
3. Suction and exhaust air regulating



### 2 Suction and exhaust air with safety regulating design

In the chamber, when the higher surface temperature of the specimens (DUT, Device Under Test), abnormal gas and smoke are detected, the regulating device for suction and exhaust air is activated to regulate the air inside the chamber.



### 3 The explosion-proof hole with square type mechanical design

The Premium class chamber is designed with the bigger size, square type explosion-proof hole on the top of the chamber, where also covered with explosion-proof net that enhance the safety of user when using the battery testing chamber.



### 4 The testing hole and explosion-proof net cover

The Premium class chamber is designed with capable to connect the testing wires simultaneously in two sides of the chamber that can conduct charge and discharge testing.

### 5 Door locker with explosion-proof design

### 6 Abnormal warning light

### 7 Smoke detection device

### 8 CO2 fire extinguisher



Carbon Monoxide Detection & Hydrogen Detection devices (optional devices for Premium class chamber)

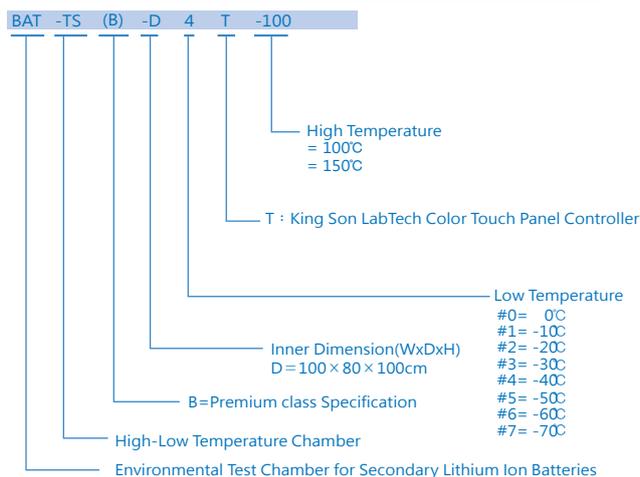
## King Son BAT-TS Environmental Test Chamber for Secondary Lithium-Ion Batteries Specification

Specification	BAT-TS-D							
Temperatd And Humidity Control								
Inside Dimensions(W · D · H)cm	100 × 80 × 100							
Outside Dimensions(W · D · H)cm)	Standard class : 167×113×193 / Premium class : 136×198×205							
Inside CapacityLiter	800							
High Temperature (H.T.)℃	100				150			
Heating Time ( 20℃-H.T.)min	30				45			
Low Temperture(L.T.) ℃	-70	-60	-50	-40	-30	-20	-10	0
Cooling Time (20℃-L.T.)min	80	70	70	50	50	35	20	15
Temperature Uniformity ℃	±1.0℃(-70℃~100℃)/±1.5℃(100.1℃~150℃)							
Temperature Stability ℃	± 0.2							
Temperature Resolution ℃	± 0.01							
System configuration								
Circulation System	Mechanical Convection System							
Refrigeration System	Air Cooled Hermetic/Semi-Hermetic Compressor) LOW GWP R-448A refrigerant Cascade Refrigeration System/Single-Stage							
Heating System	Balance Temperture P.I.D.+P.W.M.+S.S.R.							
Touch Panel Controller	King Son LabTech Color Touch Panel Controller							
Power Source	AC 220V / 1 ϕ 2W+E:AC 380 V / 3 ϕ 4W+E:AC 220V / 3 ϕ 3W+E							
Environmental Temperature	+ 5℃ ~ + 30℃							
Floor Space (W · D) cm	220 * 240							
Net Weight(kg)	610	525			495			
Insulation Material	Fire-proof PU foam (70℃~100℃) or glass fiber + fire-proof PU foam (above 110℃)							
Internal Material	SUS #304 Stainless Steel)							
External Material	SUS#304 (Stainless Steel) + 9493( 3B Surface Treatment )							
Optional Accessories	Timing Sequence Power Supply Socket,King Son AI CM Remote monitoring and management System							

※ The temperature distribution uniformity is tested according To JTM KO1-1998 (The Performance Testing Standard For Constant Temperature & Humidity Chamber setup By Japan Testing Instrument Industry Association)

※ The actual specifications may vary, Please refer to the actual price quotation for the above specifications

### Model Coding



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### ISO 9001 : 2015

Quality Management Systems  
King Son Instrument Tech. Co., Ltd.  
has established and applies  
a Quality Management System for  
Development, Production and Distribution of Temperature & Humidity Chamber, Walk-In Chamber,  
Thermal Shock Tester, Oxidation-Free Oven, HAST (Highly Accelerated Stress Tester), High Pressure  
Accelerating Life Tester and Convertible IFP (Initial Freezing Point) Food-Tech Chamber.



\*Certification Body of TÜV SÜD Asia Ltd. Taiwan Branch Management Service Department

### ISO 14001 : 2015

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\*The Certification Body of TÜV SÜD Asia Pacific TÜV SÜD Group



\*R448A refrigerant,  
an excellent replacement for R404A



**KSON**<sup>®</sup>  
RELIABILITY

**King Son Instrument Tech. Co., Ltd.**

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