



Essential for Secondary Battery Performance and Safety Testing

Battery Test Chamber / Chiller



Company
Profile



Battery Chamber
Video

About JEIO TECH

Welcome to JEIO TECH

We are a premier global technology company specializing in the development and manufacture of industrial laboratory equipment including environmental test chambers and battery safety testing equipment.

Founded in 1988, leveraging South Korea's vast legacy in technology, JEIO TECH has been serving a diverse range of industries including automotive, battery and energy storage systems, aerospace, telecommunications, consumer and industrial electronics, in addition to scientific and government research institutes.



Panoramic view of the Daejeon factory

- Korea's largest laboratory equipment manufacturer (total ground area of 29,752m²).
- High production efficiency achieved by consolidating all manufacturing processes in one location.
- Clearly defined production steps including sheet metal processing, painting, assembly, and testing.
- Fully equipped with facilities for in-house development such as testing rooms and R&D lab.



Product certification for overseas market

Excellent quality, modern One-Stop manufacturing system

JEIO TECH products are put through rigorous quality control from the most basic metal processing to final inspections.

Based on over 28 years of technical experience in instrument manufacturing, our highly integrated team of engineers strive to deliver outstanding quality to our clients. Our professional know-how is the basis of our reputation as the primary partner for the customers research needs across the globe.



1. Sheet metal processing



2. Painting



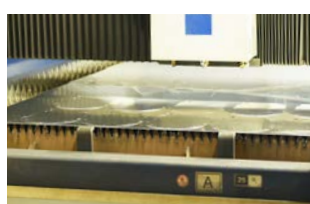
3. Assembly



4. Testing



Mold Making & Metal Part Processing



Automation and Modern Manufacturing System

Immaculate Service

We endeavor to enhance customer value through superior service to our customers. Our ergonomically designed products minimize maintenance and mechanical issues. Our worldwide service teams, made up of highly trained service engineers, are ready to provide you a tailored customer service experience.



Provide prompt and tailored customer service by service team

Custom-made service through accumulated expertise and know-how

JEIO TECH, the Korean representative of laboratory equipment and reliability testing equipment, has established the SP Division to supply test equipment optimized for individual customers and to provide more specialized customer service. The SP Division has a track record of successfully supplying products to leading companies such as Samsung and LG and is growing together with customers with a responsible approach.

Custom-Built Test Chambers (SP Division)

Technical Service Team

Conduct specialized consultations for customer requirements

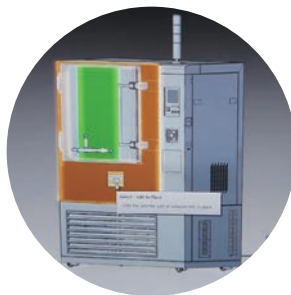
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Design Expert Team

Provide solutions based on consultations through appropriate design



Analyse customer's test requirements



Design to meet customer demands



Thorough process management and QC

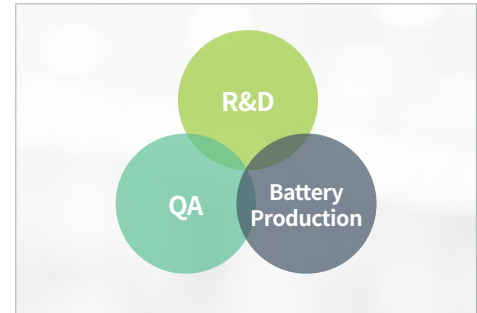


Professional on-site installation and training

Battery Test Chamber

Battery Test Chamber for Battery Performance and Safety Tests

JEIO TECH's battery test chambers can be used to perform various tests including temperature cycling tests, altitude tests, and heat resistance tests. These test chambers are applicable to R&D, quality assurance, and battery production. In addition, the chambers are suitable for performance and safety tests of batteries. They are equipped with separate safety devices to protect against ignition and explosion, which may occur during the testing processes.



Scope of applications of battery test chambers

Battery Cell/Module Test Chamber



Battery Module/Pack Test Chamber



Model	TC-JT-446LS	TC-2C-252L	TC-JT-1200L	TC-JT-6570L
Chamber Volume	446L	252L x 2Room	1,200L	6,570L
Temperature Range	-10°C ~ 80°C	0°C ~ 70°C	-50°C ~ 80°C	-50°C ~ 80°C
Air Flow	Vertical	Vertical	Horizontal	Horizontal
Interior Dimension (W x D x H, mm)	750 x 700 x 850	500 x 600 x 750 (2 Room)	1200 x 1000 x 1000	3000 x 1500 x 1500
Exterior Dimension (W x D x H, mm)	1300 x 1350 x 1800	860 x 1360 x 2096	2097 x 1933 x 2097	3900 x 3100 x 2200
Door Type	Single Door	Single Door	Single Door	Double Door
Cable Port	Φ80 x 1ea	Φ80 x 1ea	Φ100 x 4ea	Φ100 x 4ea
Safety Option	Signal Lamp, Vent Blast Door, Pressure Relief Exhaust Duct, Flame Sensor, Smoke Sensor, Fire Suppression System			
Test Standard				
ISO 12405-4	Performance Test of Battery Packs and Systems			
UN 3480-38.3	Transportation Test and Criteria for Lithium Battery			

※ Custom-built according to customer requirements.

Battery Pack Test Walk-in Chamber



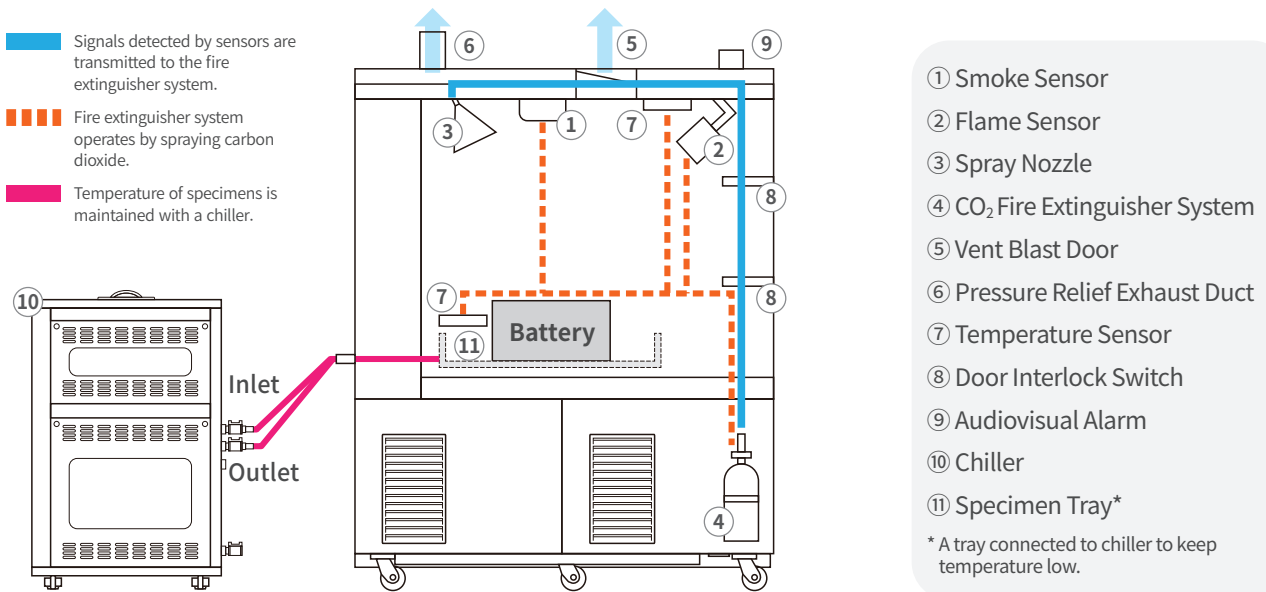
Customer Requirements	
Inner Size	3500 x 5500 x 2500 mm
Temperature Range	-40°C ~ 60°C
Humidity	30%RH ~ 95%RH
Test Standard	
IEC 62133-2	Safety requirements for lithium systems
IEC 62281	Safety requirements for the transportation of batteries
IEC 62619	Safety requirements for batteries
IEC 62620	Industrial secondary batteries and batteries
IEC 62660	Lithium secondary battery cells for electric vehicles

※ Custom-built according to customer requirements.

Battery Test Chamber by JEIO TECH

Battery Test Chamber Use Configuration

Signals detected by sensors are transmitted to fire extinguisher system. Fire extinguisher system operates by spraying carbon dioxide. Temperature of specimens is maintained through connection with a chiller.



① Smoke Nozzle

Smoke is detected and automatically extinguished.



② Flame Sensor

A flame is detected and automatically extinguished.



③ Spray Nozzle

The automatic fire extinguishing system engages if abnormal temperature, smoke, or fire detected.



④ CO₂ Fire Extinguisher System

The CO₂ purge system triggered automatically or manually (internal or external).



⑤ Vent Blast Door

Upon explosion, ducts are automatically opened to relieve pressure and gas.



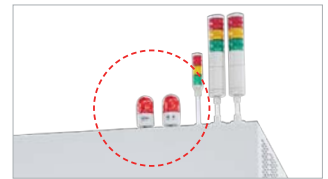
⑥ Pressure Relief Exhaust Duct

In case of explosion, pressure and gas are automatically discharged connected to building's exhaust.



⑧ Door Interlock Switch

The door is locked during testing or after an event.



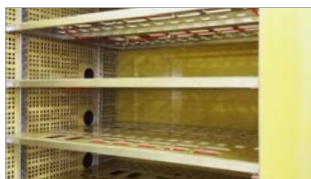
⑨ Audiovisual Alarm

Audiovisual alarms are provided to check the operation of the fire extinguisher system.



Window Cover

A cover covering the inner see-through window to prevent the scattering of glass during ignition and explosion.



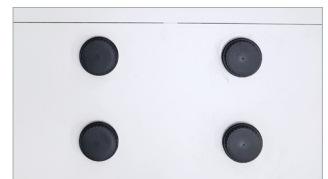
Heavy Load Shelf Structure

Punched shelf made of insulative epoxy can bear a maximum load of 200 kg.



Fixable Caster

Casters make products easily movable and can support heavy loads.



Ports with Easy External Connections

Additional cable ports of various sizes are available.

Chiller

Essential for Keeping Battery Temperature Low

Chiller is normally used to quickly and reliably remove heat from chemical or technical processes. Therefore, it should be possible to maintain accurate temperature and pressure without being disturbed by external factors such as ambient temperature effects or pressure fluctuations.



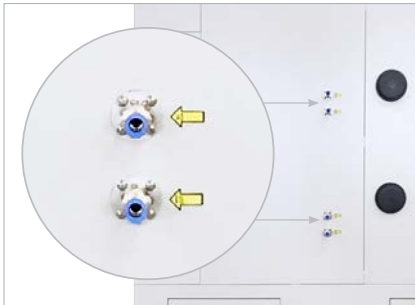
RW-2B-30L



RW-JT-80L (water-cooled)



RW-JT-80L (air-cooled)



Line for connecting chiller with battery test chamber



Display showing temperature and pressure



Set and control temperature and flow rate

Specification

Model	RW-2B-30L	RW-JT-80L
Bath Capacity	30L x 2Bath	80L
Temperature Range	10°C ~ 80°C	-30°C ~ 60°C
Temperature Stability	±1.0°C	±1.0°C
Pump Flow Rate (Max.)	20 L/min	20 L/min
Pump Pressure	3 ~ 5 bar	3 ~ 5 bar
Exterior Dimension	500 x 1,942 x 1,773 mm	800 x 1,400 x 1,800 mm

※ Custom made for capacity and specifications based on customer needs.

Customized Product

Previous cases of custom made products in various forms

JEIO TECH manufactures chambers with various functions and specifications depending on the purpose and site. Get the best solution to meet your needs through professional consultation.



Fireproof temperature test chamber



Double-door chamber



Top-and-bottom dual chamber



Explosion-proof temperature test chamber



Multi-stage drawer type oven



Tunnel type oven



Front-and rear double-door chamber



Altitude test chamber



Double-door walk-in chamber for battery pack

Standard & Customized Test Chambers in JEIO TECH

From small table top chamber to large walk in chamber



Walk in Chamber



Heating & Cooling Chamber



Temperature & Humidity Chamber



**Chiller
(Recirculating Coolers)**

Consultation with customer to develop customized solutions

Please contact JEIO TECH for more information and services.

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