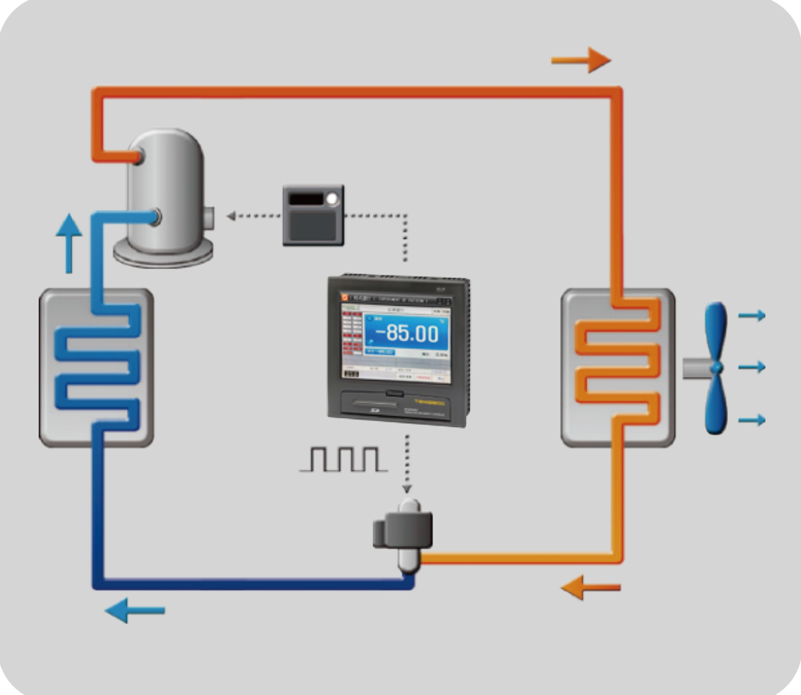
SANWOOD®
environmental test chambers

Walk in Battery Explosion Proof High & Low Temperature Chamber

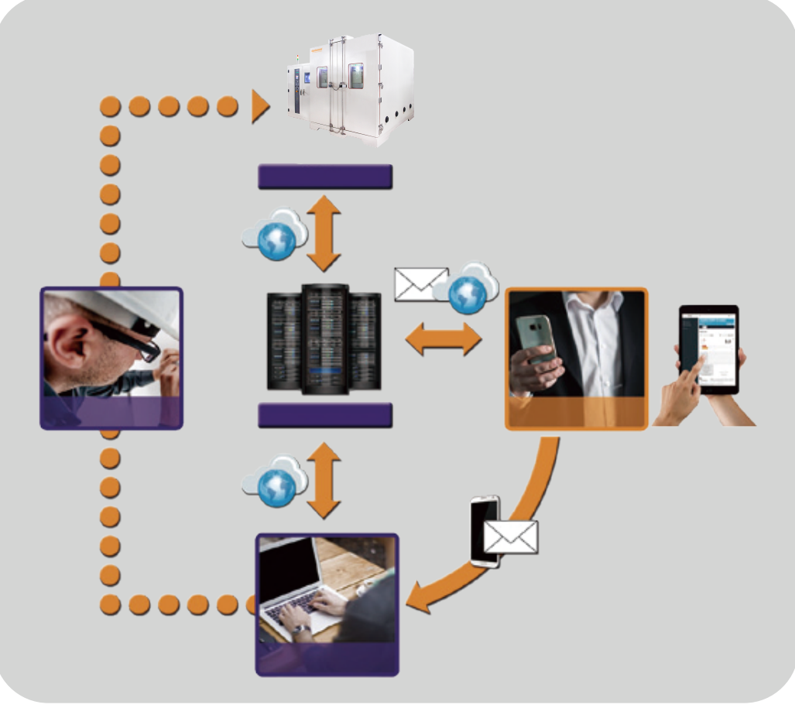
Battery Explosion Proof
High & Low Temperature Chamber

High & Low
Temperature Chamber

Battery High & Low
Temperature Chamber



Energy Conservation



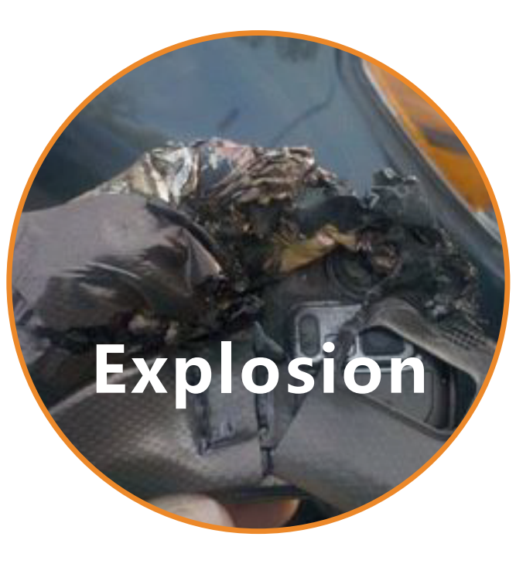
Remote network system

Circuit System

Why does battery heat,fire and explosion? What will happen under such phenomenon?

Burn somebody directly or decrease the insulation performance of components security and make the flammable liquid ignition.

Burn somebody directly, or may cause products with battery fire.

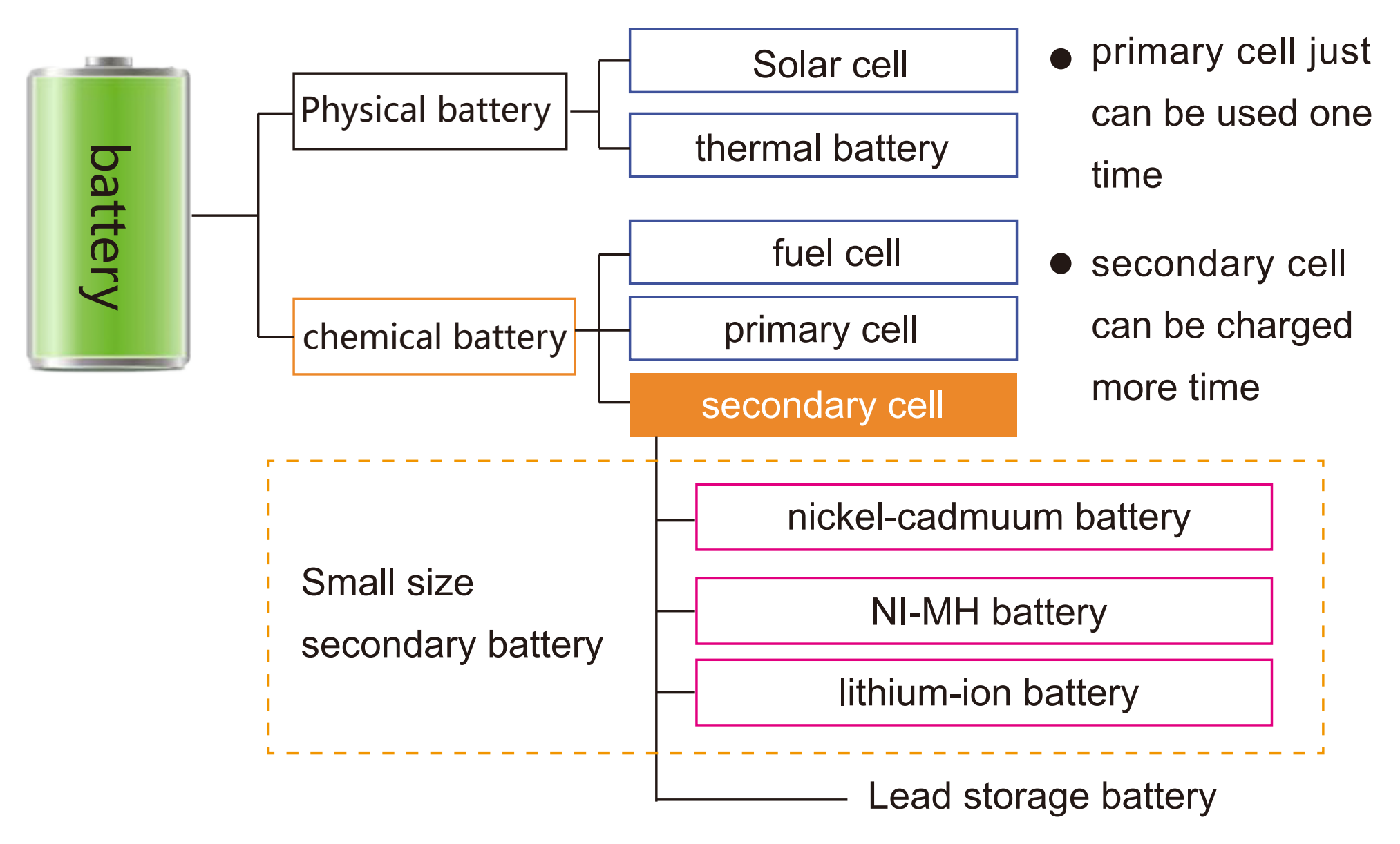


Harm somebody directly or damage equipment

What test should be battery made?

Secondary battery environmental test

Battery type



- primary cell just can be used one time
- secondary cell can be charged more time

Lithium-ion batter advantages:

Small size

- portabilityenergy density, with same capacity, its weight is only half of the nickel cadmium battery and nickel metal hydride batteries, its volume just 20 to 50% of them.
- Its action voltage is 3 times to nickel cadmium battery and nickel metal hydride battery, the machine just nedd equipped with a few batteries, small size and portablity.

Continuous charge

- can be charged and discharged under any condition and stock reservoir which will not reduce energy capacity to continuous charging.

Safety and environmental protection

- Over-charging ability and over-thermal safety.
- No cadmium, lead, mercury, etc.

Environmental test necessity and test method

The necessary reason for environmental test

With econdary battery widely used, the environment will also be changed as mobile phones, computers, household appliances, electric tools, automobile such area change

Necessary test

Secondary battery applied in chemical reaction,and chemical reation affected by environment (especially the temperature) a lot

Low/High Temp. Performance Test	preservation test	Charge/discharge test	Transport test
charge or discharge under different environmental temperature to check secondarybattery performance under such temperature condition	Under specific environment to long-time use battery and test battery leakeage and safety performance	under specific environment to charge/discharge battery repeatedly and check every battery performance	Simulate air transport, road transport (UN) specification
Temperature requirement: any point from-30~30C (according to the temperature range of battery type and usage)	Temperature requirement: any point from -10~70C (according to the temperature range of battery type and usage)	Temperature requirement: any point from-30~30C (according to the temperature range of battery type and usage)	Vibration requirement: 7~18Hz/1G、18~200Hz/8G、1.6,mmp-p、X、Y、Z 3 hour) Impact and shock requierment: accelaration 150G and maintain 6s on peak value

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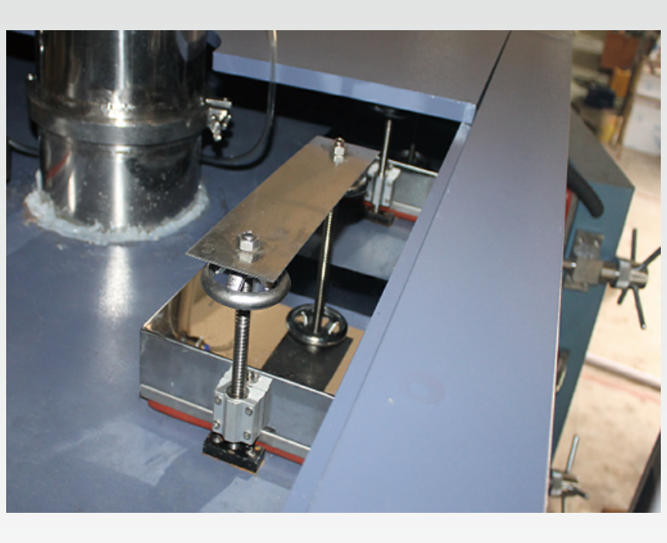
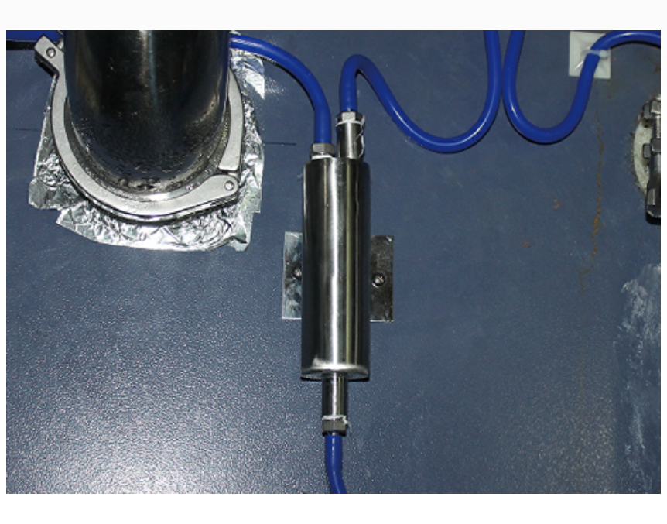
- **Options**

VAnti heat
accumulation device



Explosion-proof
pressure relief

Explosion-proof
door lock



pressure relief device

Hydrogen sensing device

CO2 tank

- Specifications

Model		SMC-080-CC-FB-WT	SMC-120-CC-FB-WT	SMC-160-CC-FB-WT	SMC-250-CC-FB-WT	SMC-340-CC-FB-WT	SMC-400-CC-FB-WT
Temperature	Temperature range	-65℃～80℃(+15℃)（A:0℃～80℃;B：-20℃～80℃；C：-40℃～80℃;D:-65℃～80℃)					
	Temperature fluctuation	±0.5℃					
	Cooling rate	180.0℃～25.0℃ Cooling rate 2.0～3.0℃/min 25.0℃～-40.0℃ Cooling rate 1.0～2.0℃/min -40.0℃～-70.0℃ Cooling rate0.7～1.5℃/min					
	Heating rate	25℃→+100℃/within 25 mins（with standard load)					
	Temperature uniformity	±2.0℃ (-40.0℃～80.0℃) ±2.5℃ (-40.0℃～-65.0℃)					
Humdiity	Humidity control range	20.0%RH～95.0%RH					
	Humidity fluctuation	±1.5% RH					
	Humidity uniformity	±3.0%RH					
Material	Internal material	Stainess steel(SUS304)					
	External material	Cold rolled steel sheet / powder spraying					
	Heat insulating material	100mm thickness polyurethane plate＋10mm thickness mineral wool					
	Fan	Centrifugal blower					
	Compressor	Semi-closed Germany Bock, Germany Bitzer					
	Condenser	Water-cooled					
	Refrigerant	R404A、R23、R508					
	Evaporator	Fin - and - Tube Heat Exchanger					
	Heater	Nickel chromium alloy heating wire					
	Humidifier	Steam humidifier					
Options	Standard configuration	2 100MM pressure relief port, 4 explosion-prood chains					
	Multipoint temperature	Adopts Sanwood developed controller, which can be used to acquire surface temperature points of multiple products					
	C02 fire extinguisher	Automatic fire extinguishing and automatic shutdown of the machine to protect the equipment from burning					
	C0, H2 gas detector	When the battery will produce gas, it will detect gas solubility and discharge to outdoor when it exceeds the standard					
	Exhaust valve	When the test sample produces harmful gas, ventilate and exhaust internally					
Size	Interior size(mm)	1970*2100*1970	3020*2100*1970	4070*2100*1970	3020*2100*4070	4070*2100*4070	5120*2100*4070
	Outer size(mm)	2170*2350*3500	3220*2350*3500	4270*2350*3500	4650*2350*4270	5720*2350*4270	5320(*2350*6150
	Volume（m³)	8.0m³	12.0m³	16.0m³	25.0m³	34.0m³	40.0m³
Power supply		380V AC 50/60Hz					
Controller		Adopts Sanwood developed controller, which can be used to acquire surface temperature points of multiple products					

Sanwood (HK) Industrial Corporation.,limited
Guangdong Sanwood Technology Corporation.,limited

ADD: No.88, Songchang Road, Songbotang , Changping, Dongguan, Guangdong
TEL: +86+769-81182799
FAX: +86+769-82987199
E-mail: info@sanwood.cc
www.sanwood.cc

Mobile phone scan
can visit our official website