SANWOOD®
environmental test chambers

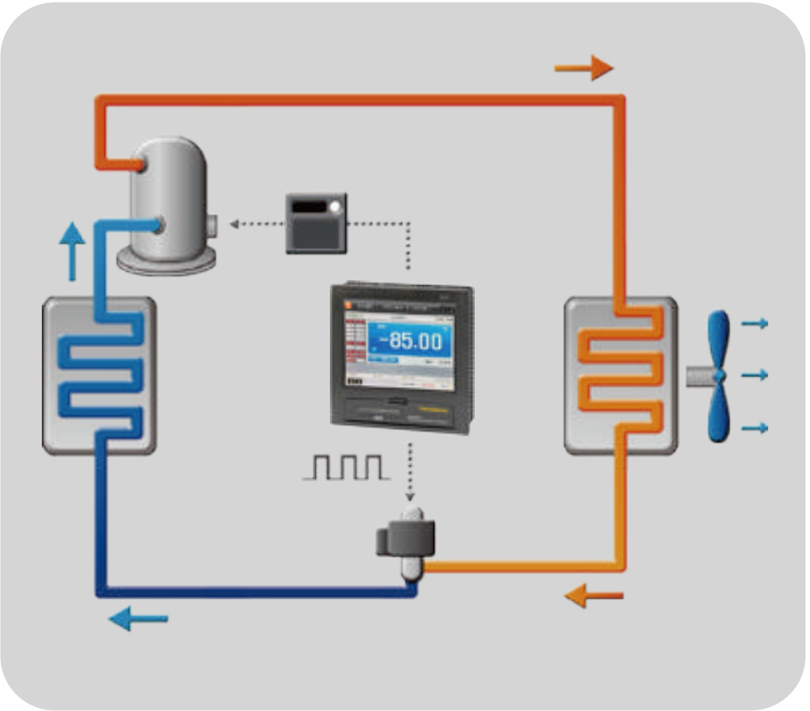
Battery Explosion Proof High & Low Temperature Chamber

Mobile phone scan
More product information

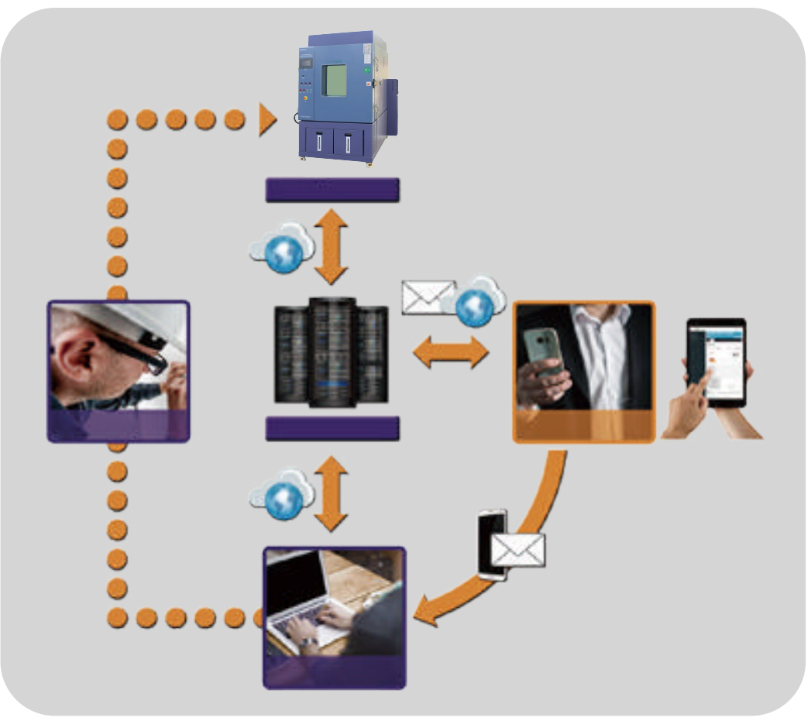
Walk in Battery Explosion Proof High & Low Temperature Chamber

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.

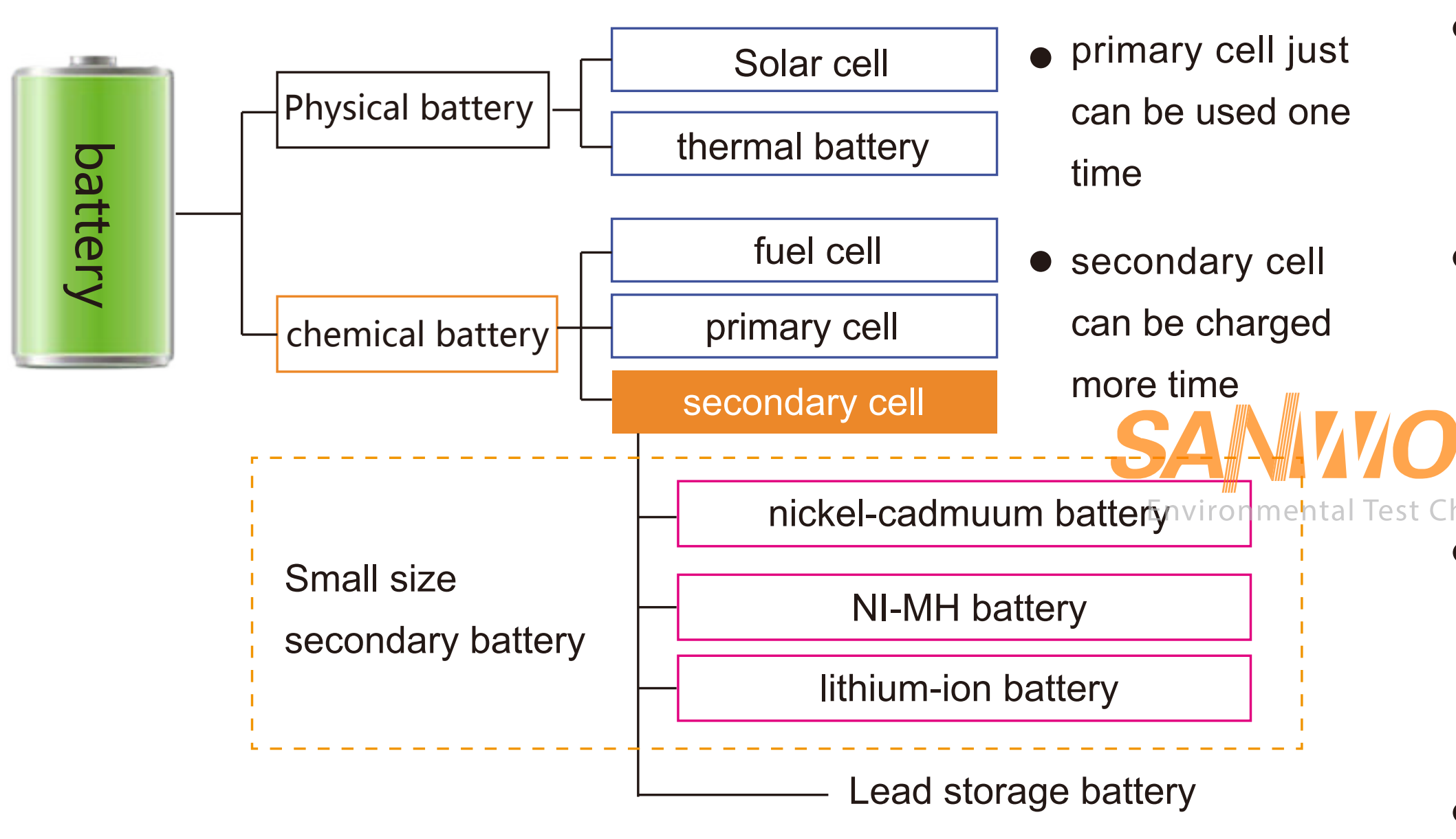
Burn somebody directly, or may cause products with battery fire.

Harm somebody directly or damage equipment

What test should be battery made?

Secondary battery environmental test

Battery type



- battery
  - Physical battery
    - Solar cell
    - thermal battery
  - chemical battery
    - fuel cell
    - primary cell
    - secondary cell
      - Small size secondary battery
        - nickel-cadmuum battery
        - NI-MH battery
        - lithium-ion battery
      - Lead storage battery

- 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 requirement: accelaration 150G and maintain 6s on peak value

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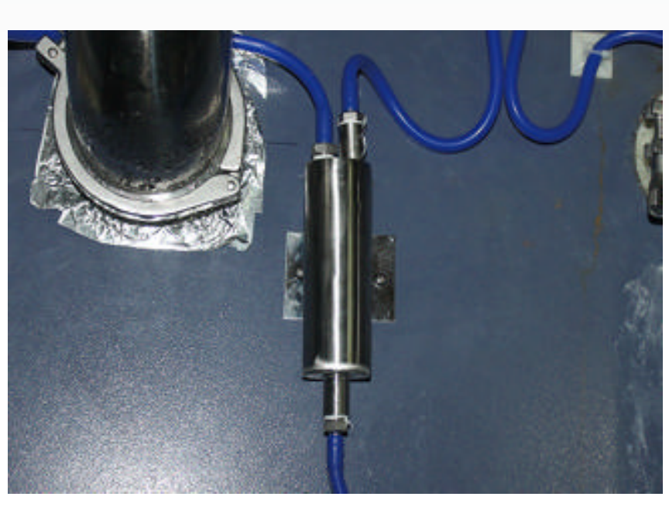
• Options

VAnti heat
accumulation device

Explosion-proof
pressure relief

Explosion-proof
door lock



pressure relief device

Hydrogen sensing device

CO2 tank

• Specifications

Model		SMC-80-CC-FB	SMC-150-CC-FB	SMC-225-CC-FB	SMC-408-CC-FB	SMC-800-CC-FB	SMC-1000-CC-FB	SMC-1500-CC-FB
Temperature	Temperature control range	-70℃～180℃ （A:0℃～180℃;B：-20℃～180℃；C：-40℃～180℃;D:-70℃～180℃)						
	Temperature fluctuation	±0.5℃						
	Cooling rate	180.0℃～-70.0℃ Within 100 mins						
	Heating rate	-70.0℃～180.0℃ Within 60 mins						
	Temperature uniformity	±1.5℃ (-40.0℃～100.0℃) ±2.0℃ (100.1℃～180.0℃or-40.0℃～-70.0℃)						
Humidity	Humidity control range	10.0%RH～98.0%RH (60℃ above corresponds to 10%RH)						
	Humidity fluctuation	±1.0% RH						
	Humidity uniformity	±2.0％RH						
Material / components	Internal material	Adopts 1.2mm thickness stainess steel(SUS304)						
	External material	Adopts 1.2mm thickness 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	Air cooling, water cooling						
	Refrigerant	R404A、R23、R508						
	Evaporator	Fin - and - Tube Heat Exchanger						
	Heater	Nickel chromium alloy heating wire						
	Humidifier	Steam humidifier						
Options	Standard configuration	2Φ100MM pressure relief port, 4 explosion-prood chains						
	Multipoint temperature monitor	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) W*H*D	500*500*400	500*600*500	500*750*600	800*850*600	1000*1000*800	1000*1000*1000	1200*1000*1250
	Outer size(mm) W*H*D	700*1680*1180	700*1720*1275	700*1930*1290	1000*2050*1400	1200*2100*1590	1200*100*1780	1400*2100*2030
	Volume（m³)	80L	150L	225L	408L	800L	1000L	1500L
	Weight	280	380	450	620	680	840	955
Operating ambient temperature		+5 ~ 35℃						
Power supply		220V AC 50/60Hz 22A	220V AC 50/60Hz 31A	220V AC 50/60Hz 33A	380V AC 50/60Hz 17A	380V AC 50/60Hz 25A	380V AC 50/60Hz 27A	380V AC 50/60Hz 50A
Controller		Standard: South Korea TEMI-1500 Optional: South Korea TEMI-2500,South Korea TEMI-2700						

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