

# WORLD-CLASS BATTERY MANUFACTURER

Energy Storage System Products and Solutions



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Guangzhou Great Power Energy & Technology Co., Ltd.  
Guangzhou Great Power Energy Storage Technology Co., Ltd.

# GREAT POWER

Stock Code: 300438, China

  
**2001**  
Established

  
**10000+**  
Over 10,000  
employees

  
**1,600,000m<sup>2</sup>**  
Covering an Area  
of 1,600,000 m<sup>2</sup>

  
**9**  
9 Production  
Facilities

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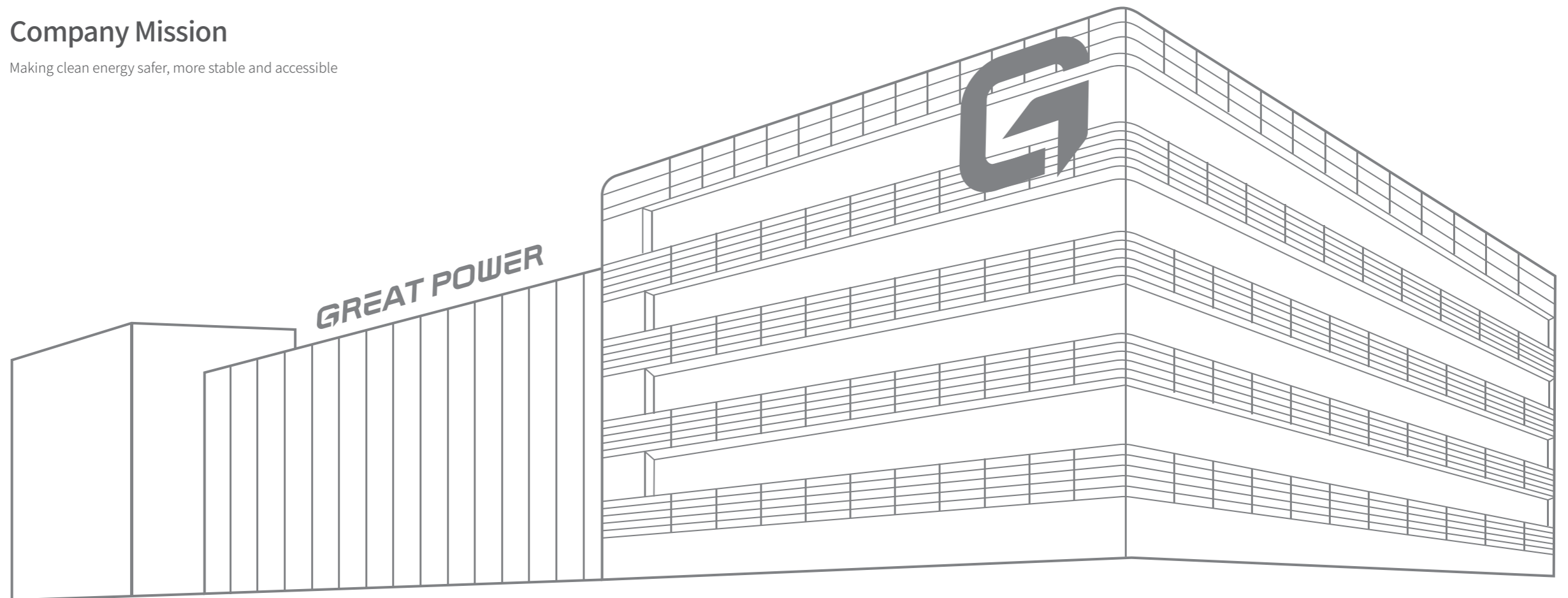
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## Company Vision

To become a global leader in battery storage technology

## Company Mission

Making clean energy safer, more stable and accessible



## COMPANY PROFILE

Great Power is a world-class battery manufacturer established in 2001, publicly listed on the stock market in 2015 in China. The company has 23 years of experience specializing in battery manufacturing, energy storage solutions, research and development.

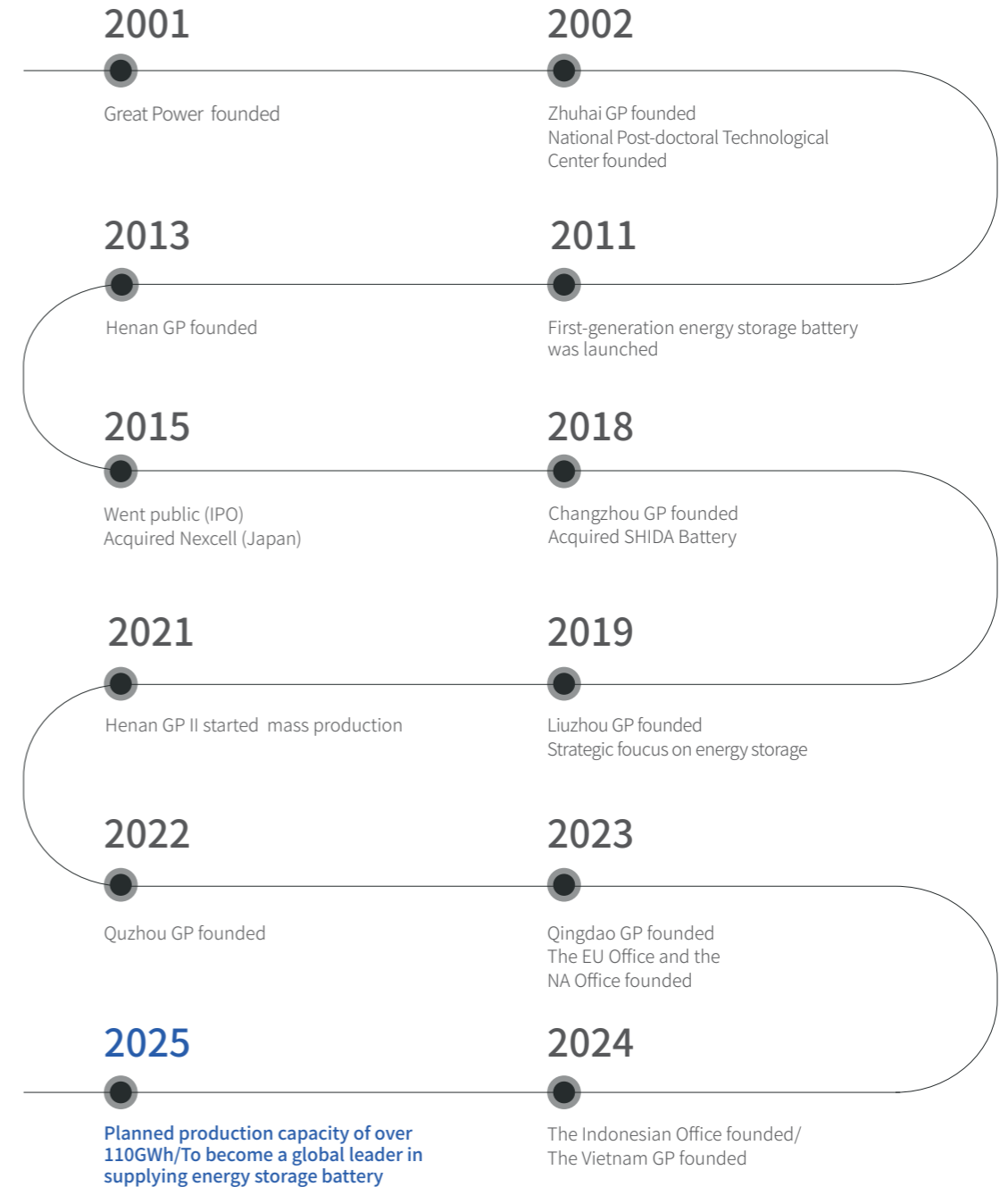
The company's primarily products are lithium-ion batteries, which are utilized in various markets such as energy storage, consumer electronics, and EV.

As a pioneer in manufacturing stationary energy storage system (ESS) batteries, Great Power introduced its first-generation ESS in 2011. The company offers a comprehensive range of battery products including cells, packs, racks, cabinets, containers, and project integration that meet requirements of all markets, such as residential, C&I and utility-scale.

Great Power's products show excellent safety performance, long cycle life and high energy efficiency. The shipment volume of Great Power's energy storage batteries has rank among the global leaders for consecutive years. The company provides energy storage solutions that deliver value to customers across more than 50 countries/areas.

Shipment data comes from GGII, CNESA, ICC, EESA, etc.

## COMPANY MILESTONES

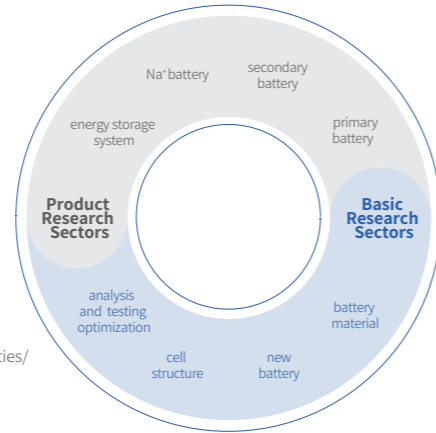


# GLOBAL LOCATIONS

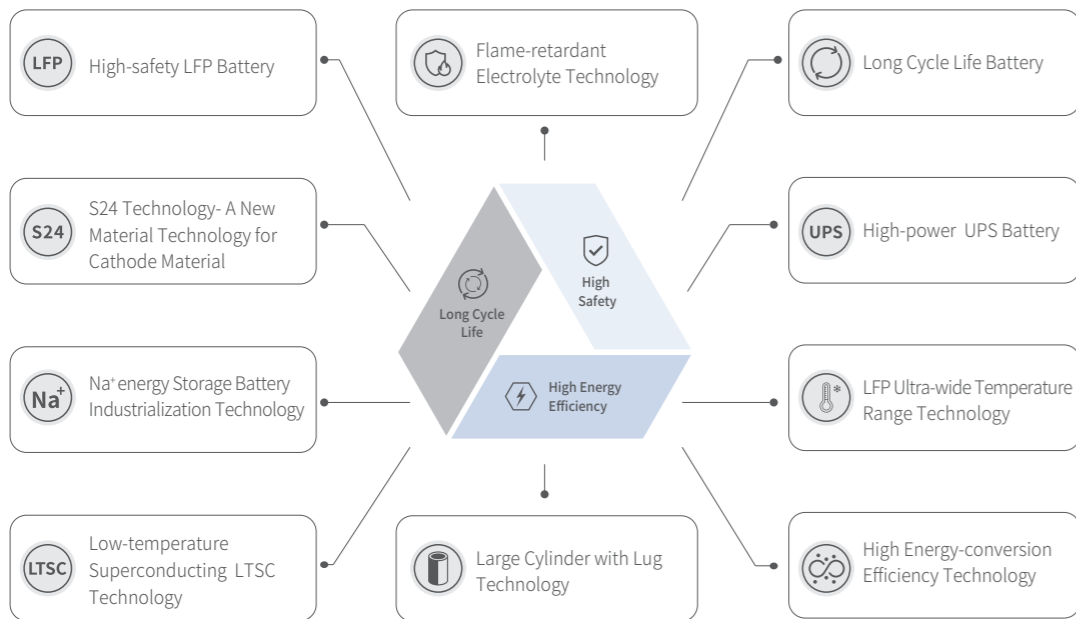
9 production facilities and 4 overseas offices



## R&D STRENGTH

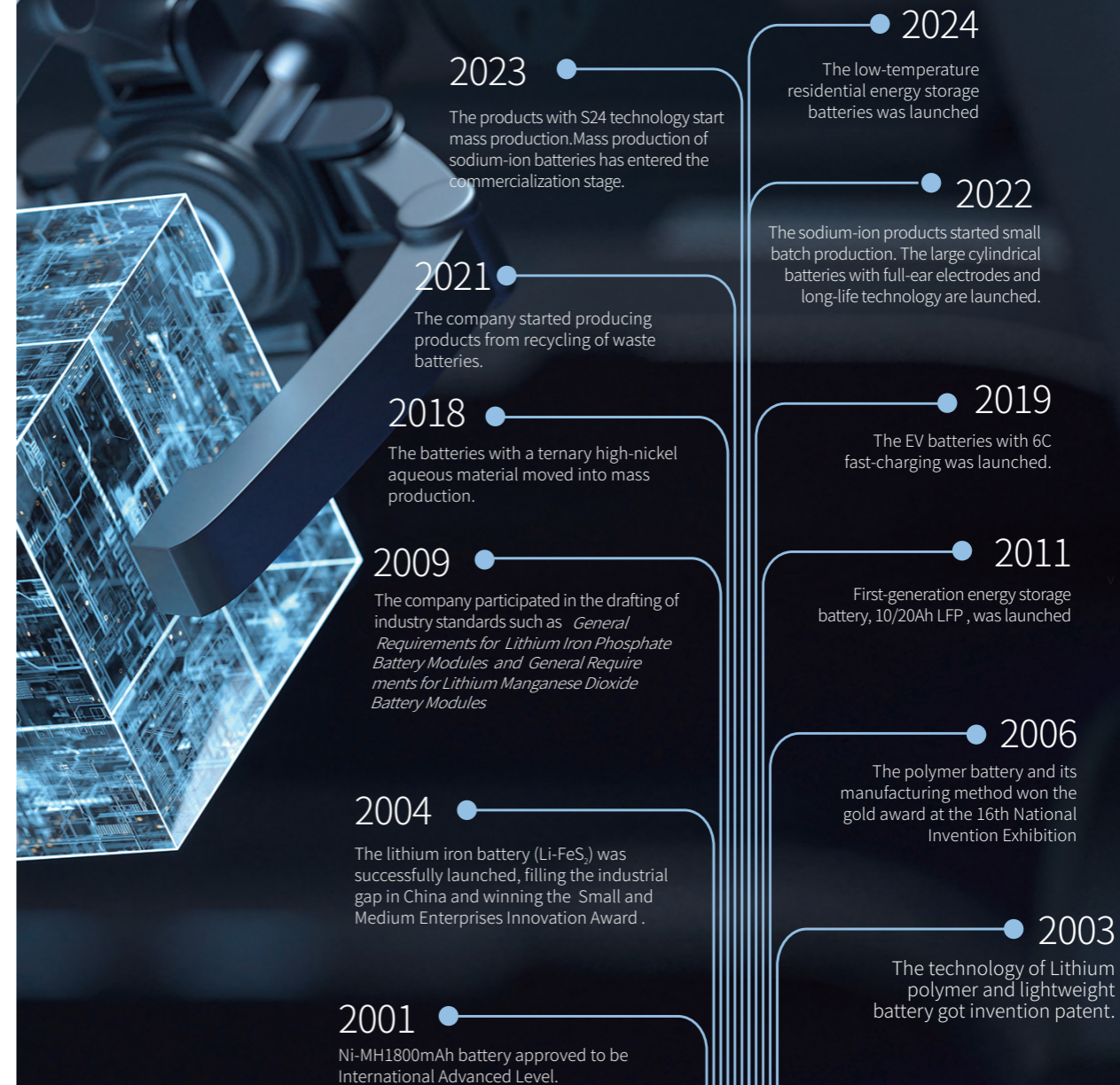


## KEY TECHNOLOGY



## TECHNOLOGY MILESTONES

Great Power have participated in the drafting of a number of battery industry standards in China



## QUALITY ASSURANCE

### Quality Management System: ISO9001, ISO14001, IATF16949

Success comes from strict quality management and unwavering attention to detail. All manufacturing facilities have certification of ISO9001, ISO14001, IATF16949, GJB9001B and ISO45001:2018, guaranteeing a strict quality management system that adds customer value. All ESS batteries are certified by UL, RoHS, CE, and QCT-743-2006.



#### Professional Team

Experts with over 20 years battery production experience to ensure the high quality of products.



#### Full-process Inspection

Test : material+product+laboratory, Average cell testing items exceed 100

### Worldwide Testing and Qualifications



IEC62619



UL1973



UL9540A



UL1642



TUV SUD  
PPP59044A



NFPA 855



Japan JET



MSDS



RoHS



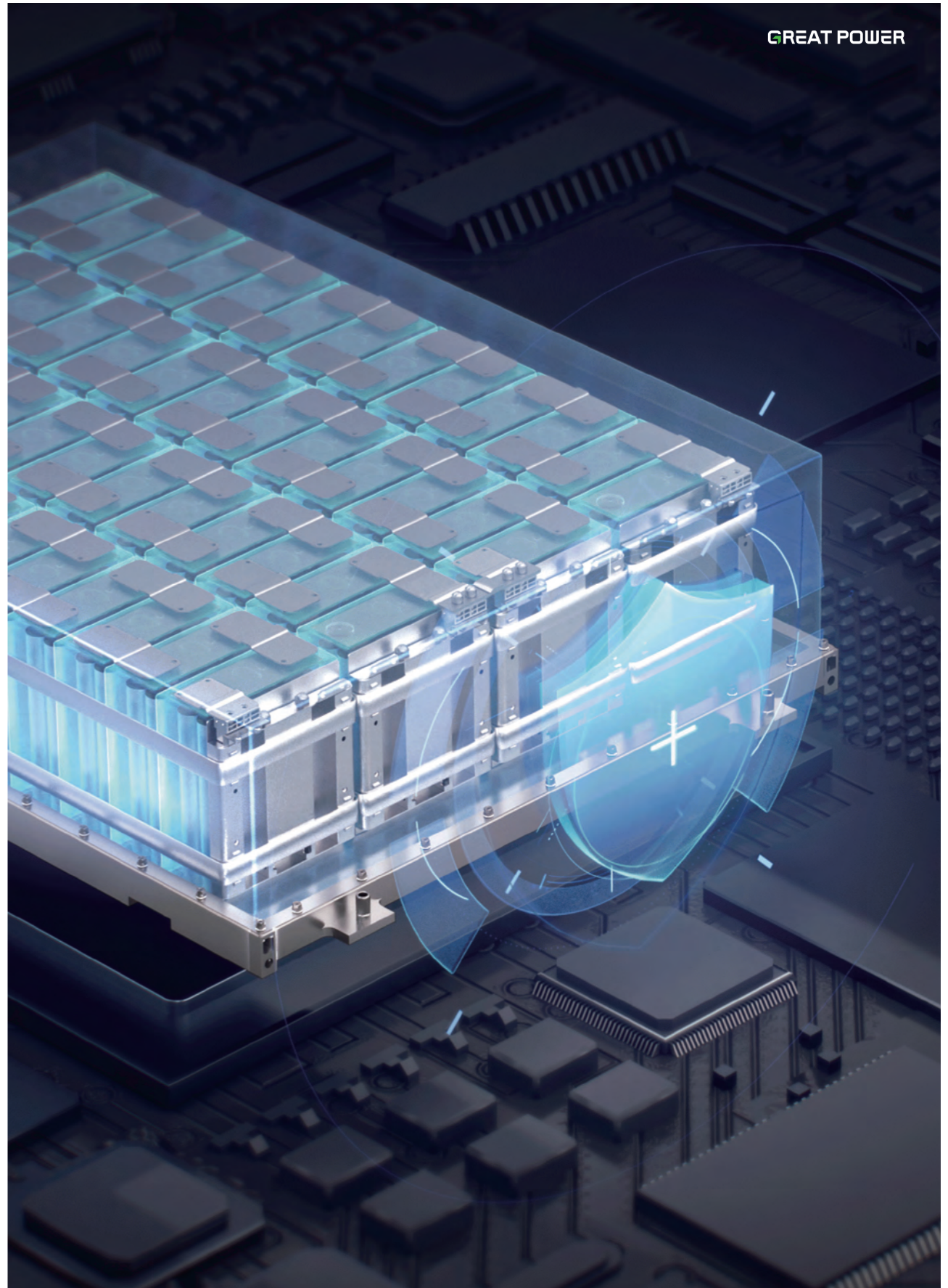
UN38.3

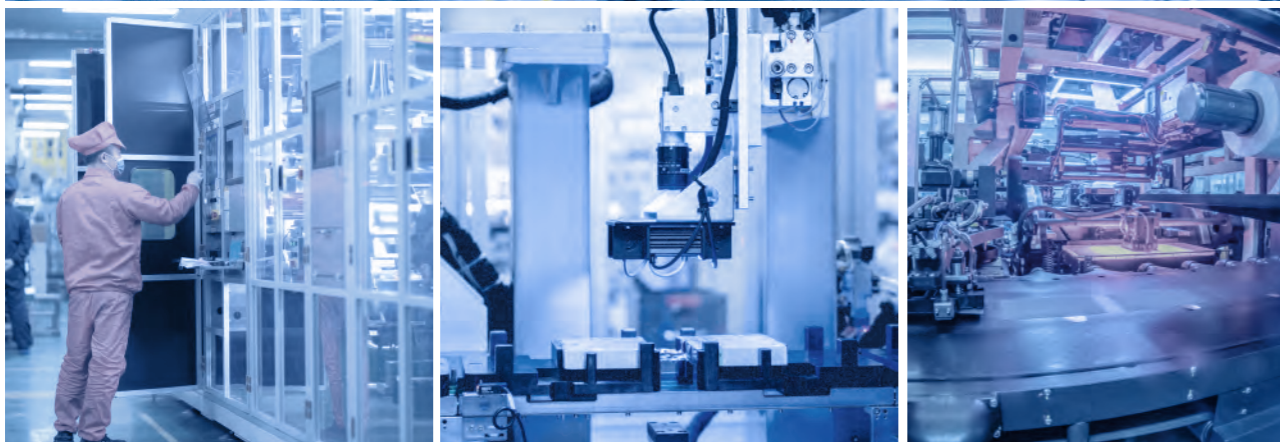


GB/T36276



EMC, LVD





## GLOBAL ADVANCED AUTOMATED PRODUCTION



### State of the Art Factories

- Imported globally advanced production lines
- Full coverage of FFU manufacturing environment
- Class 6 manufacturing environment
- Industry leading quality driven by continuous process improvement
- 24-hour monitoring and control of key production processes



### Key Processes

**Stacking:** adopting the industry-leading Z-shaped femtosecond stacking technology, it perfectly solves the efficiency of disc stacking and overhang control.

**Winding:** using the globally leading winding equipment, multi-stage tension variation and real-time correction technology, it perfectly solves the deformation and alignment of winding batteries.



### High Consistency

Utilizing high-precision fully automatic production equipment, comprehensive MES system coverage throughout the entire process, real-time monitoring of equipment parameters and product processes with a big data warning system, fully automated closed-loop correction, achieving high consistency in battery cell products, with multiple data indicators reaching a 6 Sigma.

**High-precision Fully Automatic Spiral Rod Mixing Technology**  
**Capacity-separated Liquid Cooling Technology**

# ACHIEVEMENTS

## TOP 3

2023 Chinese Commercial and Industrial ESS Market (GGII)

## TOP3

2023 Global Residential ESS Battery Market (EESA)

## TOP 6

2023 Global Power EESA Battery Market among Chinese Companies (EESA)

## TOP 6

2023 Global ESS Battery Market among Chinese Companies(SNE Research)

TOP2 in 2021 Global ESS Battery Market(CNESA)

TOP4 in 2021 for Newly Commissioned Installed Capacity in China (CNESA)

2022 EV Group Standard Drafting Unit (Guangdong Energy Association)

TOP2 in 2022 Global Residential ESS Battery Market (GGII, ICC, EESA, SPIR)

TOP5 in 2022 Global ESS Battery Market(CNESA, GGII, EESA)

2023 First Batch of Units Passing National Sodium-ion Battery Evaluation in China (SEI Laboratory/CNESA)

2023 TOP 10 Innovative Enterprises in Sodium-ion Batteries (CNESA)

2023 TOP 500 Global New Energy Companies (China Energy News)

2023 Global Financeable Battery Industry List (BNEF)

2024 8th International ESS Innovation Competition Excellence Award for Projects (The 314Ah Ultra) (CNESA)

## Key Customers







## SERVICE AND SUPPORT

**Service Team:** 15 professional teams distributed in nine regions.

**Complaint Feedback:** Feedback within 24 hours, temporary solutions provided within 48 hours, overall solutions provided within 5 working days.

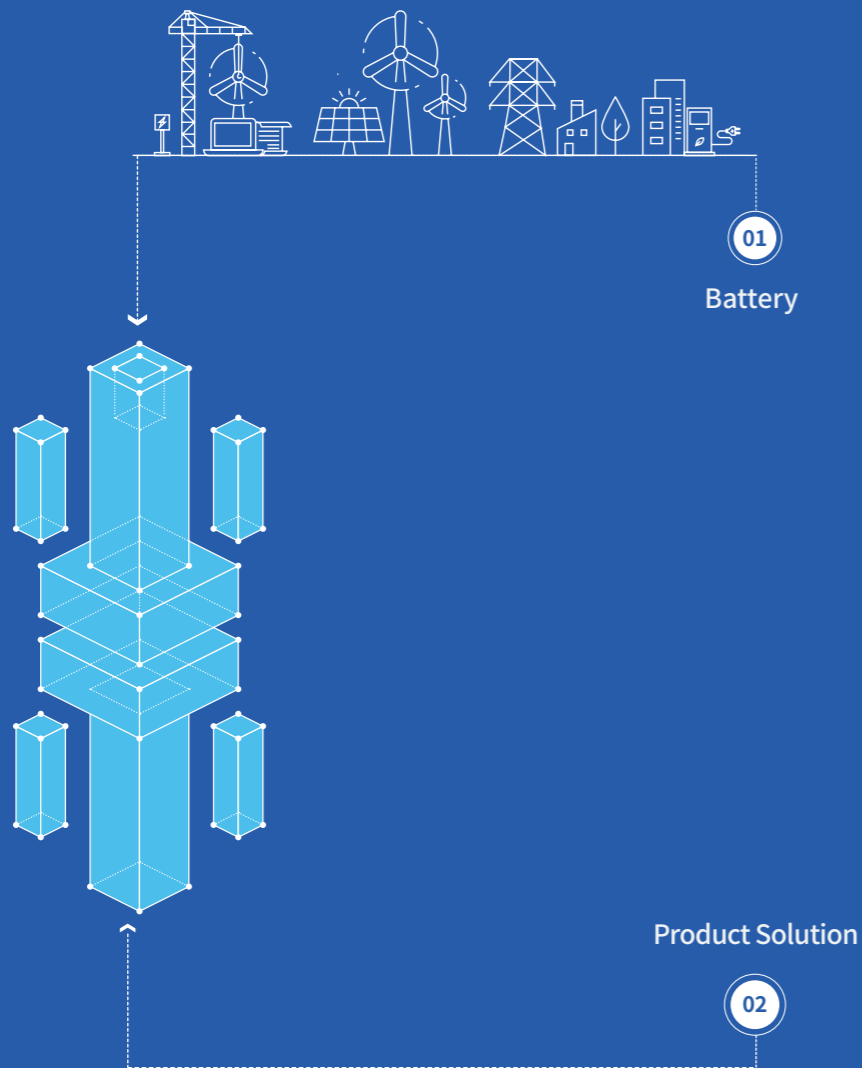
**VIP Service:** On-site support at the factory.

**System Service:** Free regular inspections during the warranty period with various service methods.

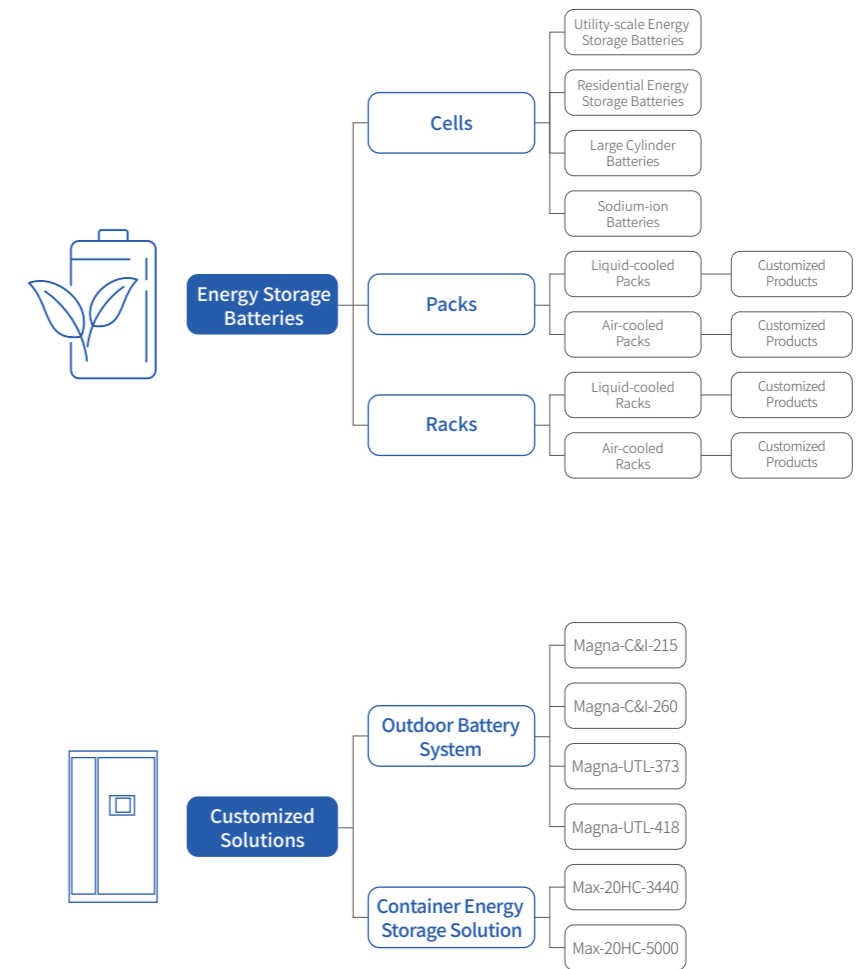
### 15 professional teams in 9 regions



# PRODUCTS AND SOLUTIONS

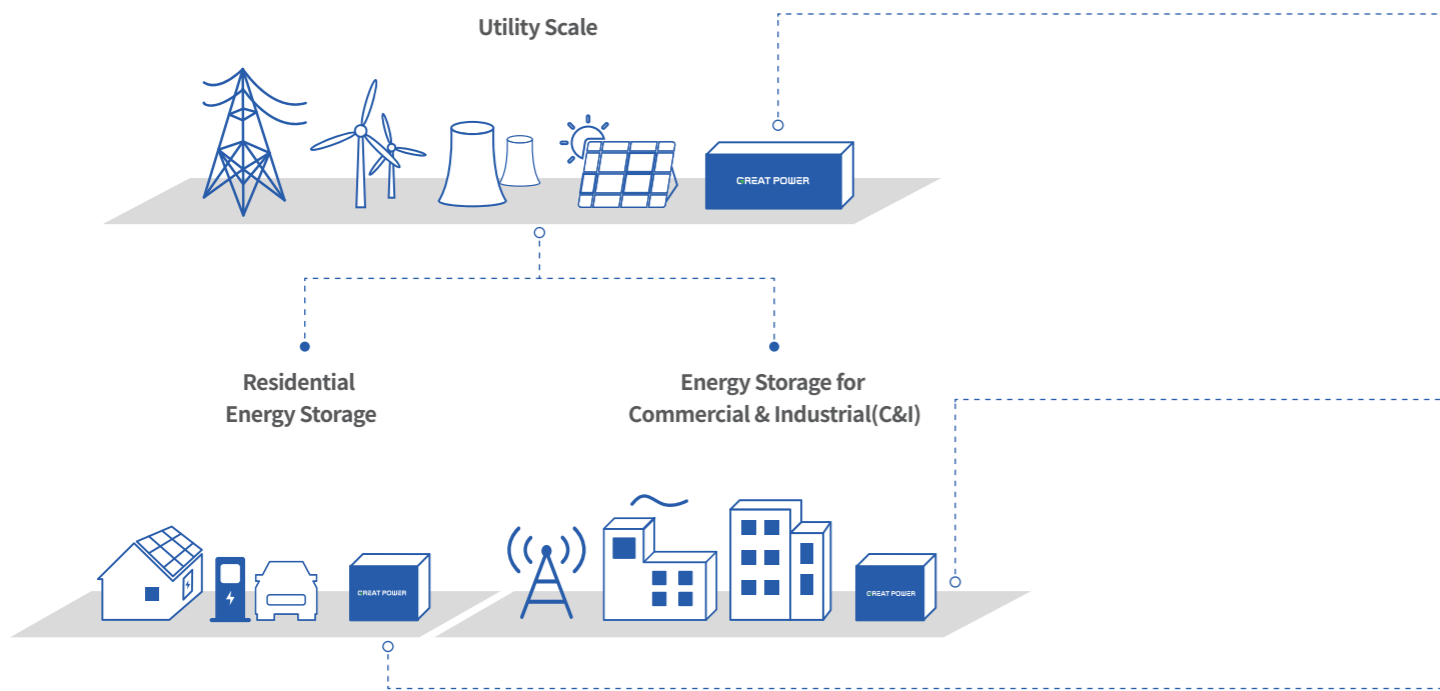


# PRODUCT MATRIX



# APPLICATIONS OF ENERGY STORAGE BATTERIES

Great Power's energy storage products are widely applied in utility-scale, residential, commercial and industrial.



## Utility Scale

**Peak shaving:** charge when the load is low and discharge when the load is high.

**Renewable Integration:** renewable energy generation is characterized by its randomness, intermittency and fluctuation. Energy storage regulates the output to meet grid connection requirements.

**Energy arbitrage:** store the electrical energy from the wind and photovoltaic energy generation plants at high peaks and deliver the energy to the grid at other periods to improve the energy utilization efficiency.

**System frequency control:** responsive within milli seconds and able to reduce the impact of change in load on the grid, thus improve the stability of the grid.

**Alleviate Congestion:** alleviate the conflicts of power consumption at high peaks and enhance the utilization of circuit for power transmission to relieve the necessity of grid system upgrade.

**Backup power supply:** ensure safe and stable power supply when there is a power failure.

## Energy Storage for Commercial & Industrial(C&I)

**Energy arbitrage:** charge when the electricity price is low and discharge when the price is high to achieve price difference arbitrage, thus reduce the cost of electricity usage.

**Dynamic capacity expansion:** reduce the overall load of grid with increased capacity and decreased cost if industrial users can store energy during the periods of low load and discharge the energy during the periods of high load.

**Backup power supply:** act as an emergency energy source and ensure uninterrupted power supply for key instruments.

## Energy Storage for Residential

**Energy arbitrage:** charge when the electricity price is low/and discharge when the price is high to achieve price difference arbitrage, thus reduce the electricity cost.

**Off-grid operation:** ensure the power supply in remote regions by integrating the system with photovoltaic generation systems.

**Portable energy source:** suitable for indoor and outdoor activities as well as emergency situations where there is no access to the grid electricity.



Desert Gobi



Marine Climate



Tropical Environment



Plateau Environment



# Energy Storage Cell The 320 Ultra

## High Safety

Global safety certifications: UL, IEC, UN, MSDS, RoHS, GB  
Non-flammable and non-explosive design  
Guaranteeing safety in energy storage systems

## Long Cycle Life

Over 8,000 cycles for long-lasting use  
25-year lifespan under standard operating conditions  
Cost reduction, efficiency enhancement, economic gain







## High Energy Efficiency

The energy efficiency  $\geq 96.0\%$   
Customer value maximization









# CELLS

## 320Ah

Product model	GSP71173204F
Capacity	320 Ah
Charging/Discharging rate	0.5 P
Cycle life	$\geq 8000@70\%$
Chemistry	LFP
Charging Temperature	0~60°C
Discharging Temperature	-30~60°C
Applications	Utility-scale, C&I
<b>Testing &amp; Certifications</b>	      <b>UN38.3</b>










## 314Ah

Product model	GSP71173204F
Capacity	314 Ah
Charging/Discharging rate	0.5 P
Cycle life	$\geq 8000@70\%$
Chemistry	LFP
Charging Temperature	0~60°C
Discharging Temperature	-30~60°C
Applications	Utility-scale, C&I
<b>Testing &amp; Certifications</b>	      <b>UN38.3</b>






## 280Ah

Product model	GSP71173204F
Capacity	280 Ah
Charging/Discharging rate	0.5 P
Cycle life	$\geq 6000@80\%$
Chemistry	LFP
Charging Temperature	0~60°C
Discharging Temperature	-30~60°C
Applications	Utility-scale, C&I
<b>Testing &amp; Certifications</b>	       <b>UN38.3</b>







## CELLS

### 220Ah

Product model	GSP54174206F
Capacity	220 Ah
Charging/Discharging rate	0.5 C
Cycle life	≥6000@70%
Chemistry	LFP
Charging Temperature	0~60°C
Discharging Temperature	-30~60°C
Applications	Utility-scale, C&I
<b>Testing &amp; Certifications</b>	   <b>UN38.3</b> <small>GB/T36276 MSDS RoHS UN38.3</small>






### 150Ah

Product model	GSP42173205F
Capacity	150 Ah
Charging/Discharging rate	1 C
Cycle life	≥4000@80%
Chemistry	LFP
Charging Temperature	0~60°C
Discharging Temperature	-30~60°C
Applications	Utility-scale, C&I
<b>Testing &amp; Certifications</b>	    <b>UN38.3</b> <small>IEC62619 GB/T36276 UL1973 BIS UN38.3</small>



## CELLS

### 100Ah

Product model	GSP34135192F
Capacity	100 Ah
Charging/Discharging rate	1 C
Cycle life	≥4000@80%
Chemistry	LFP
Charging Temperature	0~60°C
Discharging Temperature	-30~60°C
Applications	Residential, Portable
<b>Testing &amp; Certifications</b>	   <b>UN38.3</b> <small>IEC62619 UL1973 MSDS UN38.3</small>







### 72Ah

Product model	GSP39148107F
Capacity	72 Ah
Charging/Discharging rate	1 C
Cycle life	≥4000@80%
Chemistry	LFP
Charging Temperature	0~60°C
Discharging Temperature	-30~60°C
Applications	Residential, Portable



### 50Ah

Product model	GSP3914895F
Capacity	50 Ah
Charging/Discharging rate	1 C
Cycle life	≥4000@80%
Chemistry	LFP
Charging Temperature	0~60°C
Discharging Temperature	-30~55°C
Applications	Residential, Portable
<b>Testing &amp; Certifications</b>	    <b>UN38.3</b> <small>IEC62619 UL1973 UL1973 MSDS UN38.3</small>



# CELLS

## 37Ah

Product model	GSP11141238
Capacity	37 Ah
Charging/Discharging rate	1 C
Cycle life	≥6000@80%
Chemistry	LFP
Charging Temperature	0~55°C
Discharging Temperature	-15~55°C
Applications	Residential, Portable



## 30Ah

Product model	GSP11133202
Capacity	30 Ah
Charging/Discharging rate	0.5 C
Cycle life	≥6000@80%
Chemistry	LFP
Charging Temperature	0~55°C
Discharging Temperature	-15~55°C
Applications	Residential, Portable



Testing & Certifications	  
	IEC62619    BIS    UN38.3

## 25Ah

Product model	GSP82141238
Capacity	25 Ah
Charging/Discharging rate	0.5 C
Cycle life	≥6000@80%
Chemistry	LFP
Charging Temperature	0~55°C
Discharging Temperature	-15~55°C
Applications	Residential, Portable



Testing & Certifications	   
	IEC62619    UL1973    MSDS    UN38.3

# Large Cylindrical Cell



Since 2019, Great Power has been pioneering large cylindrical battery technology and products. The company is one of the earliest enterprises in the industry to research large cylindrical batteries. With five years of dedicated work, by 2024, we have developed a full product range from 6Ah to 50Ah.

As a company driven by technology, Great Power has achieved significant advancements in large cylindrical battery research and development.

In the development of large cylindrical components, Great Power adheres to first principles, fully leveraging the advantages of the large cylindrical structure. We have implemented highly integrated design for the components, significantly reducing the electronic flow path and heat dissipation distance. This has greatly enhanced the battery's high-power performance and high-rate temperature rise, while also substantially reducing costs.

In the field of large cylindrical battery cycling, We have developed large cylindrical battery cycling stress self-relief technology, addressing the issue of poor cycling performance in fast-charging large cylindrical batteries. Additionally, through exclusive research on LTSC (low-temperature superconducting) technology, we have achieved charging at -20°C and discharging at -30°C, exhibiting excellent low-temperature performance. This enables adaptation to extremely cold regions.

Having delivered over 1000Wh of products validated by customers, Great Power's large cylindrical batteries have garnered high praise for their exceptional performance and quality.



## Large Cylindrical Cell 46 Series

### 50Ah

Product model	IFR 46250
Capacity	50 Ah
Charging rate	1.2 C
Discharging rate	2.0 C
1C Cycle life	≥3000
0.5C Cycle life	≥6000
Chemistry	LFP
Charging Temperature	-20~55°C
Discharging Temperature	-20~60°C
Applications	Residential, Portable, Lightweight Power

#### Testing & Certifications



### 25Ah

Product model	IFR 46135
Capacity	25 Ah
Charging rate	1.2 C
Discharging rate	3.0 C
1C Cycle life	≥3000
0.5C Cycle life	≥6000
Chemistry	LFP
Charging Temperature	-20~55°C
Discharging Temperature	-20~60°C
Applications	Residential, Portable, Lightweight Power



### 25Ah

Product model	INR 4695
Capacity	25 Ah
Charging rate	1.2 C
Discharging rate	2.0 C
1C Cycle life	≥1500
0.5C Cycle life	≥3000
Chemistry	NMC
Charging Temperature	-20~55°C
Discharging Temperature	-20~60°C
Applications	EV, Lightweight



### 20Ah

Product model	IFR 46110
Capacity	20 Ah
Charging rate	1.2 C
Discharging rate	3.0 C
1C Cycle life	≥3000
0.5C Cycle life	≥6000
Chemistry	LFP
Charging Temperature	-20~55°C
Discharging Temperature	-20~60°C
Applications	Residential, Portable, Lightweight Power



### 20Ah

Product model	IFR 4695
Capacity	20 Ah
Charging rate	1.2 C
Discharging rate	3.0 C
1C Cycle life	≥3000
0.5C Cycle life	≥6000
Chemistry	LFP
Charging Temperature	-20~55°C
Discharging Temperature	-20~60°C
Applications	Residential, Portable, Lightweight Power



### 12Ah

Product model	IFR 4695
Capacity	12 Ah
Charging rate	2.0 C
Discharging rate	2.0 C
1C Cycle life	≥10000
0.5C Cycle life	≥20000
Chemistry	LFP
Charging Temperature	-30~55°C
Discharging Temperature	-40~60°C
Applications	12V Starting Power Supply



## 46 Series 6Ah

Product model	IFR 4665
Capacity	6 Ah
Charging rate	20 C
Discharging rate	40 C
1C Cycle life	≥10000
0.5C Cycle life	≥20000
Chemistry	LFP
Charging Temperature	-30~55°C
Discharging Temperature	-40~60°C
Applications	HEV Hybrid System, 48V Start-up Power Supply



## 33 Series 15Ah

Product model	IFR 33150
Capacity	15 Ah
Charging rate	1.2 C
Discharging rate	3.0 C
1C Cycle life	≥3000
0.5C Cycle life	≥6000
Chemistry	LFP
Charging Temperature	-20~55°C
Discharging Temperature	-20~60°C
Applications	Residential, Portable, Lightweight Power



## 40 Series 20Ah

Product model	IFR 40135
Capacity	20 Ah
Charging rate	1.2 C
Discharging rate	3.0 C
1C Cycle life	≥3000
0.5C Cycle life	≥6000
Chemistry	LFP
Charging Temperature	-20~55°C
Discharging Temperature	-20~60°C
Applications	Residential, Portable, Lightweight Power



## 33 Series 13Ah

Product model	IFR 33135
Capacity	13 Ah
Charging rate	1.2 C
Discharging rate	3.0 C
1C Cycle life	≥3000
0.5C Cycle life	≥6000
Chemistry	LFP
Charging Temperature	-20~55°C
Discharging Temperature	-20~60°C
Applications	Residential, Portable, Lightweight Power



**Testing & Certifications**

## 40 Series 18Ah

Product model	IFR 40135
Capacity	18 Ah
Charging rate	2.0 C
Discharging rate	3.0 C
1C Cycle life	≥3000
0.5C Cycle life	≥6000
Chemistry	LFP
Charging Temperature	-20~55°C
Discharging Temperature	-20~60°C
Applications	Residential, Portable, Lightweight Power







## SODIUM-ION BATTERY

Great Power Energy has carried out research on sodium-ion battery technology since 2019, and obtained major research results in layered oxide and polyanion systems in 2021. In 2022, the product will be put into small batch trial production, and the power vehicle assembly test will be carried out. In 2023, Great Power sodium-ion battery entered the commercialization stage, and in July of the same year, Great Power Energy Qingdao North Shore Holding big data center signed a contract, marking the scale application of sodium-ion battery energy storage power station entered the practical stage.

Currently, Great Power has officially released two types of hyphen sodium-ion cells: square 150Ah and small cylinder 3050mAh. Great Power sodium-ion cell passed the battery evaluation of China Electronic Technology Standardization Institute, and became the first sodium-ion battery evaluation unit in China. In the layered oxide system, high voltage system is developed to achieve energy density up to 150Wh/kg and cycle life of more than 3000 weeks; In the polyanion system, through material innovation to build a highly stable system, cycle life of more than 6000 weeks, revolutionary crack the core pain points of low sodium energy density and cycle life.

### Sodium-ion battery



**150Ah**

Product model	54173206
Capacity	150 Ah
Charging/Discharging rate	0.5 C
Cycle life	3000@80%
Charging Temperature	0~45°C
Discharging Temperature	-40~60°C
Applications	residential storage, EV battery



**3.05Ah**

Product model	26650
Capacity	3.05 Ah
Charging/Discharging rate	0.5 C
Cycle life	3000@80%
Charging Temperature	0~45°C
Discharging Temperature	-40~60°C
Applications	residential storage, EV battery

**Pack**

**LiqPack-280Ah 1P52S**  
**LiqPack-280Ah 1P48S**

- Liquid-cooled pack
- Suitable for container and cabinet energy storage systems
- Thermal insulation between cells, eliminating heat diffusion
- Uniform temperature difference within 2 °C , ensuring stability and reliability
- Metal casing with thermal insulation, preventing heat diffusion at temperatures up to 1000°C
- Great flow channel design optimized through thermal simulation technology
- High safety standard: UL 9540A
- High protection level: IP 67
- Worldwide certifications: UL9540A, UL1973, IEC62619, IEC61000 and UN38.3



**Pack**

**AirPack-150Ah 2P12S**  
**AirPack-280Ah 1P16S**  
**AirPack-150Ah 1P24S**

- Air-cooled pack
- Suitable for container and cabinet energy storage systems
- Mature technology
- Affordable cost
- Protection level: IP2X
- Transportation standard: UN383.3



Product Type	LiqPack-280Ah 1P52S	LiqPack-280Ah 1P48S
Cell Capacity	280 Ah	280 Ah
Configuration	1P 52S	1P 48S
Charging/Discharging Rate	0.5 C	0.5 C
Cooling Method	Liquid cooling	Liquid cooling
Rated Capacity	280Ah@0.5C	280Ah@0.5C
Battery System Voltage	1000/1500 Vd.c.	1000/1500 Vd.c.
Rated Energy	46.592 kWh	43.008 kWh
Protection Level	IP67	IP67
Dimensions	W786×D1141×H251.5 mm	W786×D1068×H251.5 mm
Product Weight	≈360 Kg	≈330 Kg
Maritime Standard	UN38.3	UN38.3
Applications	Container or Cabinet	Container or Cabinet
Testing&Certifications	 GB/T36276 UL1973 UL9540A IEC62619 IEC61000 UN38.3	 UL1973 UL9540A IEC62619 IEC61000 IEC62040 UN38.3

Product Type	AirPack-150Ah 2P12S	AirPack-280Ah 1P16S	AirPack-150Ah 1P24S
Cell Capacity	150 Ah	280 Ah	150 Ah
Configuration	2P 12S	1P 16S	1P 24S
Charging/Discharging Rate	0.5 C	0.5 C	1.0 C
Cooling Method	Air cooling	Air cooling	Air cooling
Rated Capacity	150Ah@0.5C	280Ah@0.5C	150Ah@1.0C
Battery System Voltage	1000 Vd.c.	1000/1500 Vd.c.	1000/1500Vd.c.
Rated Energy	11.52 kWh	14.336 kWh	11.52 kWh
Protection Level	IP2X	IP2X	IP2X
Dimensions	W450.5×D693*H242 mm	W470×D833×H225 mm	W470×D785×H225 mm
Product Weight	≈99 Kg	≈113 Kg	≈96.5 Kg
Maritime Standard	UN38.3	N/A	UN38.3
Applications	Container or Cabinet	Container or Cabinet	Container or Cabinet
Testing&Certifications	 GB/T36276	 GB/T36276	 IEC62619 IEC61000 UN38.3

**Rack**

**LiqRack-280Ah 1P416S**  
**LiqRack-280Ah 1P384S**

- Liquid-cooled pack in parallel
- Suitable for container energy storage systems
- Modular design, easy application combination
- Thermal insulation between cells, eliminating heat diffusion
- Uniform temperature difference within 2 °C, ensuring stability and reliability
- Great flow channel design optimized through thermal simulation technology
- 20% longer cycle life compared to air cooled
- Wide operating temperature range, from -40 °C to 60°C
- High protection level: IP 67



**Rack**

**AirRack-280Ah 1P416S**  
**AirRack-150Ah 1P360S**

- Air-cooled pack in parallel
- Suitable for container energy storage systems
- High safety, mature technology, reliability, and low cost
- Modular design, easy to application combination, install, and maintain.
- High-rate capability, supports up to 1C.



Product Type	LiqRack-280Ah 1P416S	LiqRack-280Ah 1P384S
Charge/Discharge Rate of The Pack	0.5C	0.5 C
Configuration	1P416S	1P 384S
Nominal Voltage	1331.2 V	1228.8 V
Working Voltage Range	900-1500Vd.c.	900-1500 Vd.c.
Rated Capacity	280 Ah	280 Ah
Rated Energy	372.7 kWh	344 kWh
Dimensions	W860×D1153×H2333 mm	W860×D1080×H2333 mm
Product Weight	≈3200 Kg	≈3000 Kg
Pack Type	LiqPack-1P52S	LiqPack-1P48S
Functional Safety	Class B	Class B
Applications	Container	Container
<b>Testing&amp;Certifications</b>	 IEC62619 IEC62619 UL1642 UL1973	 GB/T36276 IEC62619 IEC61000 UL1642 UL1973

Product Type	AirRack-280Ah 1P416S	AirRack-150Ah 1P360s
Charge/Discharge Rate of The Pack	0.5 C	1 C
Configuration	1P 416S	1P 360S
Nominal Voltage	1331.2 V	1152 V
Working Voltage Range	900-1500 Vd.c.	900-1500 Vd.c.
Rated Capacity	280 Ah	150 Ah
Rated Energy	372.7 kWh	172.8 kWh
Dimensions	W1442×D835×H2418 mm	W960×D788×H2341 mm
Product Weight	≈3200 Kg	≈1700 Kg
Pack Type	AirPack-1P16S	AirPack-1P24S
Functional Safety	Class B	Class B
Applications	Container	Container
<b>Testing&amp;Certifications</b>	 GB/T36276	 IEC62619 IEC61000

## AC OUTDOOR BATTERY SYSTEM

### Magna-C&I-260 Magna-C&I-215

Application scenarios: industrial parks, zero-carbon parks, production factories, green transportation, commercial services, data centers, and other high-power consumption settings.

**Product advantages:**

- High safety: Battery pack meets North American UL 9540A and NFPA 855 standards.
- Long lifespan: Liquid cooling mode, core temperature difference <2°C, 30% cycle improvement.
- High energy density: Actual discharge capacity exceeds 400kWh, high returns.
- Scalable: Multiple units can be interconnected, small footprint, flexible layout/addition.
- Easy maintenance: Modular design, convenient for on-site operation and maintenance
- Quick installation: Shipped after testing, ready for on-site connection.



## DC OUTDOOR BATTERY SYSTEM

### Magna-UTL-418 Magna-UTL-373

Application scenarios: industrial parks, zero-carbon parks, production factories, green transportation, commercial services, data centers, and other high-power consumption settings.

**Product advantages:**

- High safety: Passes UL9540A Unit-level test, preventing thermal runaway of battery cells. Can connect in series with PCS without risks of circulating current or inter-cluster short circuits.
- Long lifespan: Liquid cooling system maintains core temperature difference <2°C, increasing cycle life by 30%.
- Easy scalability: Replaces container solutions, allowing for flexible layout.
- Easy to be installed: Each unit weighs under 4 tons, facilitating on-site hoisting and installation.
- Easy maintenance: Modular design for convenient on-site maintenance.



Product Type	Magna-C&I-260	Magna-C&I-215
Product Category	AC Outdoor Liquid-cooling Battery System	AC Outdoor Liquid-cooling Battery System
Rated Energy	260kWh@0.5C	215kWh@0.5C
Rated Power	125 kW	100 kW
Rated Output Voltage	380 Va.c.	380 Va.c.
Cell Capacity	314 Ah	280 Ah
Cell Type	LFP	LFP
Configuration	1P 260S	1P 240S
Discharge Current	223 A	178 A
Charging Current	223 A	178 A
Charging Temperature	0~50°C	0~45°C
Discharging Temperature	-20~50°C	-20~50°C
Communication Port	CAN, 485	CAN, 485
Cooling Method	Liquid Cooling	Liquid Cooling
Protection Level	IP55	IP55
Functional Safety	class B	class B
Product Weight	≈2725 Kg	≈2550 Kg
Dimensions	W1300×D1310×H2265 mm	W1300×D1310×H2265 mm
Applications	Utility-scale, C&I	Utility-scale, C&I

**Testing&Certifications**



Product Type	Magna-UTL-418	Magna-UTL-373
Product Category	DC Outdoor Liquid-cooling Battery System	DC Outdoor Liquid-cooling Battery System
Rated Energy	418kWh@0.5C	372.7kWh@0.5C
Rated Power	Max 209 kW	180 kW
Rated Output Voltage	900-1500 Vd.c.	900-1500 Vd.c.
Cell Capacity	314 Ah	280 Ah
Cell Type	LFP	LFP
Configuration	1P 416S	1P 416S
Discharge Current	157 A	140 A
Charging Current	157 A	140 A
Charging Temperature	0~45°C	0~45°C
Discharging Temperature	-20~50°C	-20~50°C
Communication Port	CAN, 485	CAN, 485
Cooling Method	Liquid Cooling	Liquid Cooling
Protection Level	IP55	IP55
Functional Safety	class B	class B
Product Weight	≈4100 Kg	≈4000 Kg
Dimensions	W1300×D1300×H2365 mm	W1300×D1300×H2365 mm
Applications	Utility-scale, C&I	Utility-scale, C&I

**Testing&Certifications**



## CONTAINER ENERGY STORAGE SOLUTION

### Max-20HC-3440

**Electric power scenarios:**

Wind or photovoltaic power generation.  
Suitable for regions with significant peak-valley price differences and areas with large fluctuations in daily load.

**Product advantages:**

High safety: Compliant with UL9540A standards.  
High energy efficiency: >95% energy efficiency for DC charge and discharge.  
Long lifespan: Designed for a 15-year service life with a 30% increase in battery lifespan.  
High returns: Offers high energy density and integration for increased life cycle returns.  
Easy to be installed: Highly integrated design for simple scalability and installation; supports third-party SCADA and cloud-based EMS integration.



## CONTAINER ENERGY STORAGE SOLUTION

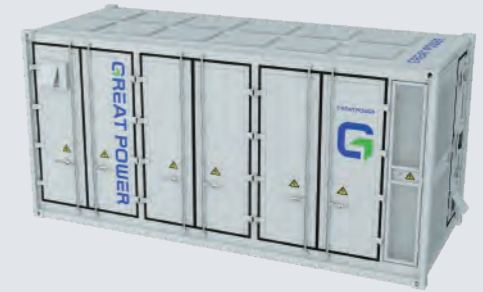
### Max-20HC-5000

**Electric power scenarios:**

Wind or photovoltaic power generation, and regions with significant peak-valley price differences or large load fluctuations.

**Product advantages:**

High safety: Compliant with UL9540A, NFPA855.  
High energy efficiency: Battery cell efficiency  $\geq 96\%$ ; RTE 96% @ 0.25p, 95% @ 0.5p on the DC side.  
Easy to be installed: Integrated design in a 20 gp container.  
High protection: IP55 overall, IP67 for Battery Pack, IP54 for High-voltage box, IPX5 for Electrical compartment.  
Cost-effective: 50% increase in energy density for enhanced life cycle returns.



Product Type	Max-20HC-3440
Product Category	20HC DC liquid-cooling container energy storage solution
Rated Energy	3.44MWh@0.5C
Rated Power	180kW*10/1.7MW
Rated Output Voltage	900-1500 Vd.c.
Cell Capacity	280 Ah
Cell Type	LFP
Configuration	1P384S*(10 or 9 or 8)
Maximum Discharge Current	173 A*(10 or 9 or 8)
Maximum Charging Current	173 A*(10 or 9 or 8)
Charging Temperature	0~45°C
Discharging Temperature	-20~50°C
Communication Port	CAN, 485, TCP/IP
Cooling Method	Liquid Cooling
Protection Level	IP54
Functional Safety	class B
Product Weight	<36T
Dimensions	W6058*D2438*H2896 mm (20HC)
Applications	Utility-scale, C&I

**Testing&Certifications**



Product Type	Max-20HC-5000
Product Category	20HC DC liquid-cooling container energy storage solution
Rated Energy	5.0MWh@0.5C
Rated Power	$\leq 417\text{kW} \times 6 / 1.25\text{MW} \times 2$
Rated Output Voltage	1040-1500 Vd.c.
Cell Capacity	314 Ah
Cell Type	LFP
Configuration	1P416S*12
Maximum Discharge Current	157 A*12
Maximum Charging Current	193 A*12@5min
Charging Temperature	-30~+50°C
Discharging Temperature	-35~+60°C
Communication Port	CAN, RS485, RJ45/Optical fiber
Cooling Method	Liquid Cooling
Protection Level	IP55
Functional Safety	class B
Product Weight	<42T
Dimensions	W6058*D2438*H2896 mm (20HC)
Applications	Utility-scale, C&I

**Testing&Certifications**



## Recommended Products

Great Power has accumulated 23 years of experience in energy storage batteries, with significant advantages in the performance and specifications of battery cells and their integration.

Structure	Model	Capacity	Rating	Rated voltage	Testing & Certifications
Aluminum shell cell	3914895	50Ah	0.5C	3.2V	UL1973, UN38.3, IEC62619-2017, IEC62619-2022, UL9540A
Aluminum shell cell	36130140P	50Ah	0.5C	3.2V	UL1973, UN38.3, IEC62619-2017
Aluminum shell cell	36130150F	50Ah	0.5C	3.2V	UL1642, UN38.3
Aluminum shell cell	27135206H	80Ah	0.5C	3.2V	UL1973, UL1642, UN38.3, IEC62619-2017, UL9540A
Aluminum shell cell	34135214	100Ah	0.5C	3.2V	UL1973, UL1642, UN38.3, IEC62619-2017, UL9540A
Aluminum shell cell	50160119F	100Ah	0.5C	3.2V	UL1973, UL1642, UN38.3, IEC62619-2017, IEC62619-2022, UL9540A, BIS
Aluminum shell cell	27135250F	100Ah	0.5C	3.2V	UL1642, UN38.3, IEC62619-2017, BIS
Aluminum shell cell	34135214F	100Ah	0.5C	3.2V	UL1973, UL1642, UN38.3, IEC62619-2017, UL9540A
Aluminum shell cell	34135192F	100Ah	0.5C	3.2V	UL1642
Aluminum shell cell	34135214H	113Ah	0.5C	3.2V	UL1642, UN38.3
Aluminum shell cell	42173166	135Ah	0.5C	3.2V	UN38.3, IEC62619-2017
Aluminum shell cell	42173205	150Ah	0.5C	3.2V	UL1973, UN38.3, IEC62619-2017, IEC62619-2022, GBT36276, BIS
Aluminum shell cell	71173204F	280Ah	0.5C	3.2V	UL1973, UL1642, UN38.3, IEC62619-2017, UL9540A, GBT36276
Aluminum shell cell	71173204F	314Ah	0.5C	3.2V	
Aluminum shell cell	71173204F	320Ah	0.5C	3.2V	
Pouch cell	78133202	20Ah	1.0C	3.2V	UN38.3
Pouch cell	82141238	25Ah	1.0C	3.2V	UL1973, UN38.3, IEC62619-2017, UL9540A
Pouch cell	09133202	25Ah	1.0C	3.2V	UN38.3, IEC62619-2017
Pouch cell	11133202	30Ah	1.0C	3.2V	UN38.3

Structure	Model	Capacity	Charging rate	Discharging rate	Rated voltage	Testing & Certifications
Large Cylindrical Cell	33135	13Ah	1.2C	3C	3.2V	
Large Cylindrical Cell	33150	15Ah	1.2C	3C	3.2V	
Large Cylindrical Cell	40135	18Ah	2C	3C	3.2V	
Large Cylindrical Cell	40135	20Ah	1.2C	3C	3.2V	UL1642, UN38.3, IEC62619-2017, BIS
Large Cylindrical Cell	4665	6Ah	20C	40C	3.2V	
Large Cylindrical Cell	4695	12Ah	20C	20C	3.2V	
Large Cylindrical Cell	4695	20Ah	1.2C	3C	3.2V	
Large Cylindrical Cell	46110	20Ah	1.2C	3C	3.2V	
Large Cylindrical Cell	4695	25Ah	1.2C	2C	3.6V	
Large Cylindrical Cell	46135	25Ah	1.2C	3C	3.2V	
Large Cylindrical Cell	46250	50Ah	1.2C	2C	3.2V	UL1642, UN38.3, IEC62619-2017, BIS

Structure	Model	Capacity	Rating	Voltage	Certifications
Module	25.6V 13.2Ah	13.2Ah	0.5C	25.6V	UN38.3
Module	48V 80Ah	80Ah	0.5C	48V	IEC62619-2017
Module	25.6V 100Ah	100Ah	0.5C	25.6V	UN38.3, IEC62619-2017
Module	48V 100Ah	100Ah	0.5C	48V	UN38.3
Module	76.8V 113Ah	113Ah	0.5C	76.8V	UN38.3
Module	76.8V 150Ah	150Ah	1.0C	76.8V	UN38.3
Module	48V 200Ah	200Ah	0.5C	48V	UN38.3
Module	166.4V 280Ah	280Ah	0.5C	166.4V	UL9540A
Module	51.2V 280Ah	280Ah	0.5C	51.2V	GBT36276
Module	38.4V 290Ah	290Ah	0.5C	38.4V	GBT36276
Module	38.4V 300Ah	300Ah	0.5C	38.4V	UN38.3

Category	Product type	Rating	Testing & Certifications
RACK	PH-ESS-384V150Ah	1.0C	IEC62619-2017, IEC62619-2022, EMC
RACK	PH-ESS-460.8V150Ah	1.0C	IEC62619-2017, IEC62619-2022, EMC
RACK	PH-ESS-537.6V150Ah	1.0C	IEC62619-2017, IEC62619-2022, EMC
RACK	PH-ESS-614.4V150Ah	1.0C	IEC62619-2017, IEC62619-2022, EMC
RACK	PH-ESS-691.2V150Ah	1.0C	IEC62619-2017, IEC62619-2022, EMC
RACK	PH-ESS-768V150Ah	1.0C	IEC62619-2017, IEC62619-2022, EMC
RACK	PH-ESS-844.8V150Ah	1.0C	IEC62619-2017, IEC62619-2022, EMC
RACK	PH-ESS-921.6V150Ah	1.0C	IEC62619-2017, IEC62619-2022, EMC
RACK	PH-ESS-998.4V150Ah	1.0C	IEC62619-2017, IEC62619-2022, EMC
RACK	PH-ESS-1075.2V150Ah	1.0C	IEC62619-2017, IEC62619-2022, EMC
RACK	PH-ESS-1152V150Ah	1.0C	IEC62619-2017, IEC62619-2022, EMC
RACK	PH-ESS-1228.8V150Ah	1.0C	IEC62619-2017, IEC62619-2022, EMC
RACK	PH-ESS-1305.6V150Ah	1.0C	IEC62619-2017, IEC62619-2022, EMC
RACK	PH-ESS-1331.2V280Ah	0.5C	GBT36276
RACK	PH-ESS-768V290Ah	0.5C	GBT36276
RACK	PH-ESS-768V300Ah	0.5C	IEC62619-2017

## REFERENCE PROJECTS

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**23** Years

experience in  
lithium-ion battery  
technology &  
manufacturing



**1000** K+sets

Over 1000k sets of energy storage  
products installed



**0**

accidents



**50+**

countries/areas

## GLOBAL REFERENCE PROJECTS



CNPC's Tarim Oilfield 600MWh  
Photovoltaic Power Generation Project



Ulanqab 180MWh  
Green Power Station Demonstration Project



Jimusaer 150MWh Project



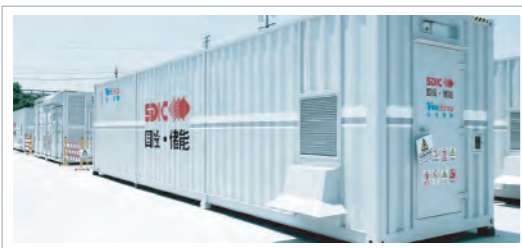
Bachu 140MWh  
Agro-Photovoltaic Complementary Project



Nanning 100MWh Energy Storage Project



State-Owned Shipyard 100MWh  
Energy Storage Station Project



DL Industrial Park 80MWh  
Energy Storage Station Project



Ji'an 15MWh  
Agro-Photovoltaic Complementary Project

## GLOBAL REFERENCE PROJECTS



Qingdao Sodium-Ion 10MWh Project  
(Under Construction)



SAIC-GM-Wuling 1MWh  
Step-Utilization ESS Project



Kangding 392kWh  
Photovoltaic Off-grid Energy Storage Project



Croatia 17MWh  
Photovoltaic and Storage Complementary Project



Germany 16.77MWh  
Containerized Energy Storage Project



The Netherlands Emmen 3.6MWh  
Photovoltaic and Storage Complementary Project



India 2MWh  
High-Grid Photovoltaic Storage Project



Marinska 1MWh Malin Hotel Project



## GLOBAL REFERENCE PROJECTS



Croatia 17MWh  
Photovoltaic and Storage Complementary Project



Zhejiang Xianhe New Energy Co., LTD. 44.72MWh  
Energy Storage Project



Zhuhai Great Power Production 29.77MWh Project



Guangzhou Production 7.33MWh Project



Shenzhen Yinghe 3.26MWh Project



Zhumadian Zhongji Huajun 2.8MWh Project



Guangzhou Xinli 2.33MWh Project



Runan Yuxin 1.5MWh Project

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