

# REPT BATTERO

COMPANY INTRODUCTION

2025 | REPT Energy,  
Driving a Sustainable Future.



# CONTENTS

01

GROUP  
INTRODUCTION

02

COMPANY  
INTRODUCTION

03

R&D  
CAPABILITY

04

DEVELOPMENT  
STRATEGY

# GROUP INTRODUCTION



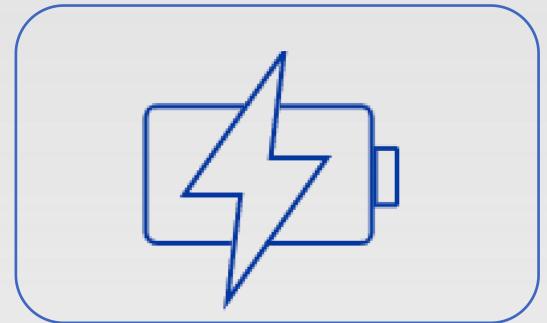
Refining Stainless Steel for a Century,  
Building a Green Future

Tsingshan Holding Group - A Fortune Global 500 Company

# TSINGSHAN INDUSTRY INTRODUCTION

REPT  
BATTERO

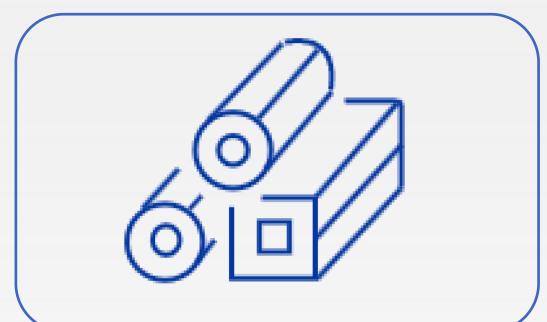
## Main Business Areas



New Energy Battery  
Research and  
Manufacturing



Nickel and Lithium  
Mines R&D and  
Production



Stainless Steel  
Manufacturing  
and Trade

## Ranked 11th

China's Top 500 Private  
Enterprises in the  
Manufacturing Industry

## Ranked 247th

on the 2025 Fortune  
Global 500 List



## Development History

1988年

Company  
founded

1992年

Entered the  
stainless steel  
industry

2003年

Formed  
Tsingshan  
Holding Group

2009年

Invested in mining  
operations in  
Indonesia

2018年

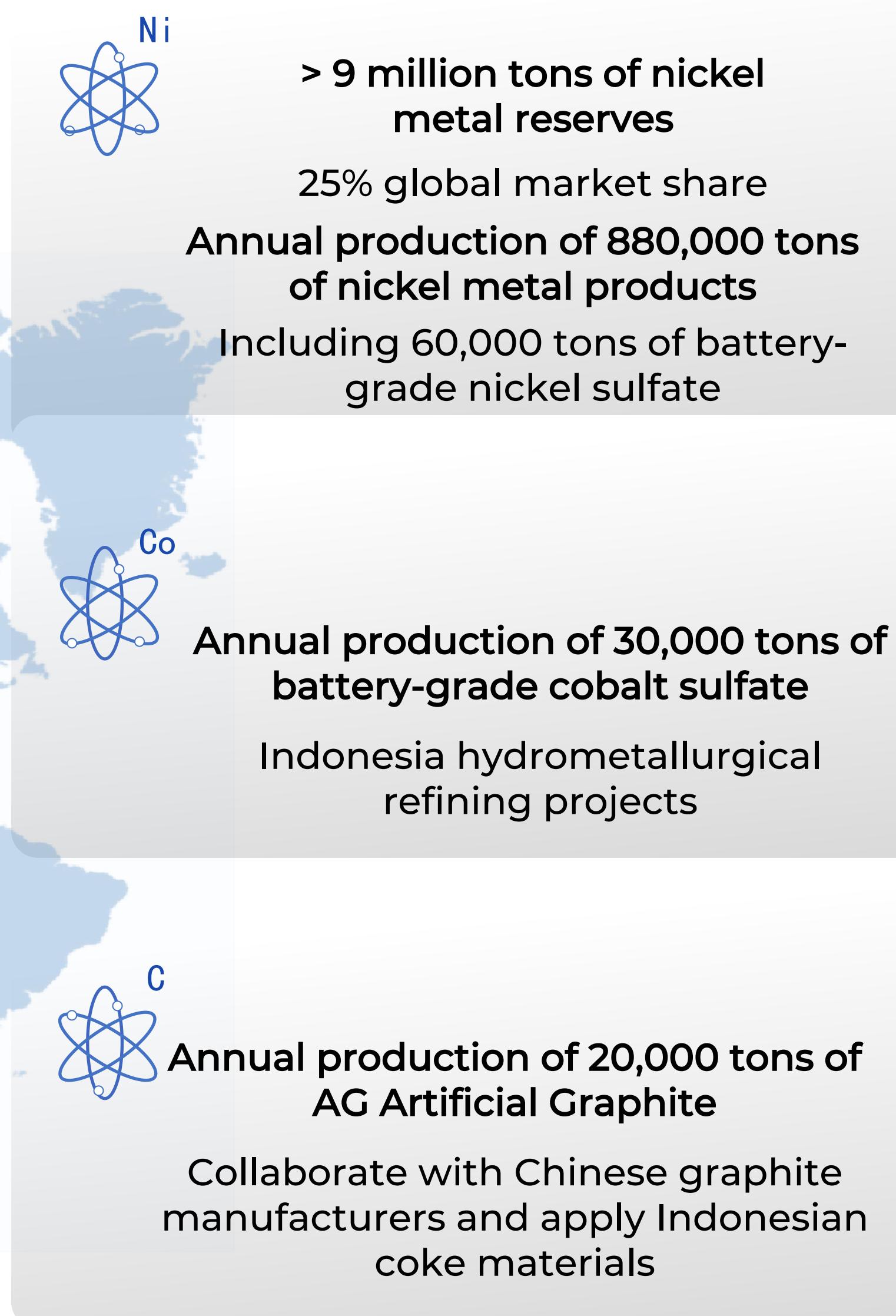
Became the world's largest nickel producer  
and fully integrated the upstream and  
downstream sectors of new energy lithium  
batteries

## Rapid Expansion of the Industry Chain

Tsingshan Group plans to expand across multiple segments of the lithium battery value chain through direct holdings or equity investments.

## Resource Integration and Synergy

- Long-term stable supply
- Integrated industry chain
- Favorable business environment provided by market rules
- Backward integration of the industry chain to enhance bargaining power



## Partner



# COMPANY INTRODUCTION

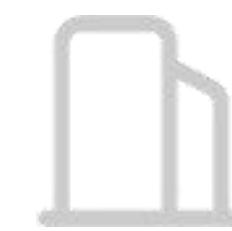
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02

Leading the Future, Anchored in Safety

REPT BATTERO Energy Co., Ltd.

2017



- REPT BATTERO Energy was established
- Construction of the Wenzhou manufacturing base commenced

2018



- The 3GWh production line at the Wenzhou base was officially put into operation

2019



- Mass delivery of ternary lithium batteries for electric passenger vehicles
- Entered the Dongfeng Passenger Vehicle

2022



- Globally launched the "Wending Battery"
- Signed a contract for the 20 GWh production base in Liuzhou
- Phase III construction of the Wenzhou base commenced
- Annual sales revenue exceeded CNY 10 billion

2021



- Secured sentinel procurement from the PSA-O2C project
- Officially entered the international power battery market
- Phase II of the Wenzhou base officially began production

2020



- Construction of the Jiashan manufacturing base commence
- High-energy-density LFP batteries delivered to SAIC-GM-Wuling Automobile

2023



HK 00666

- REPT BATTERO's European subsidiary officially launched
- Awarded the 2022 National Green Factory title
- Joined the Global Battery Alliance (GBA)
- **Successfully listed on the Hong Kong Stock Exchange**
- The second - phase line of Jiashan is in operation and the third - phase project has commenced Liuzhou base project began production
- Signed the Chongqing production base project

2024



- REPT BATTERO's North American subsidiary officially launched
- REPT BATTERO Yangtze River Delta Research Institute established
- Recognized as a BloombergNEF (BNEF) Tier 1 Global Manufacturer for four consecutive years
- Recognition as a Global Tier-1 Manufacturer

2025



- REPT BATTERO ranked first globally in the shipment volume of household energy storage cells in the first half of 2025.
- REPT BATTERO ranked second nationwide in the installed capacity of new energy heavy-duty truck batteries in the first half of 2025.

## Experts in New Energy Power and Energy Storage Battery

REPT BATTERO Energy Co., Ltd., established in 2017, is the first enterprise in the new energy sector under Tsingshan Industry's strategic expansion. We are primarily engaged in the research, development, production, and sales of lithium-ion batteries, providing solutions for new energy vehicle power and smart energy storage, working alongside our customers to accelerate the global transition to green energy.



# R&D CAPABILITY

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Through continuous innovation in materials, processes, structures, manufacturing techniques, and business models, we provide customers with unique and differentiated solutions, jointly advancing the industry and creating a better future.

03

We integrate standard development/product certification, functionality, performance, safety, and reliability testing and predictive analysis to offer customers the ultimate quality and safety solutions

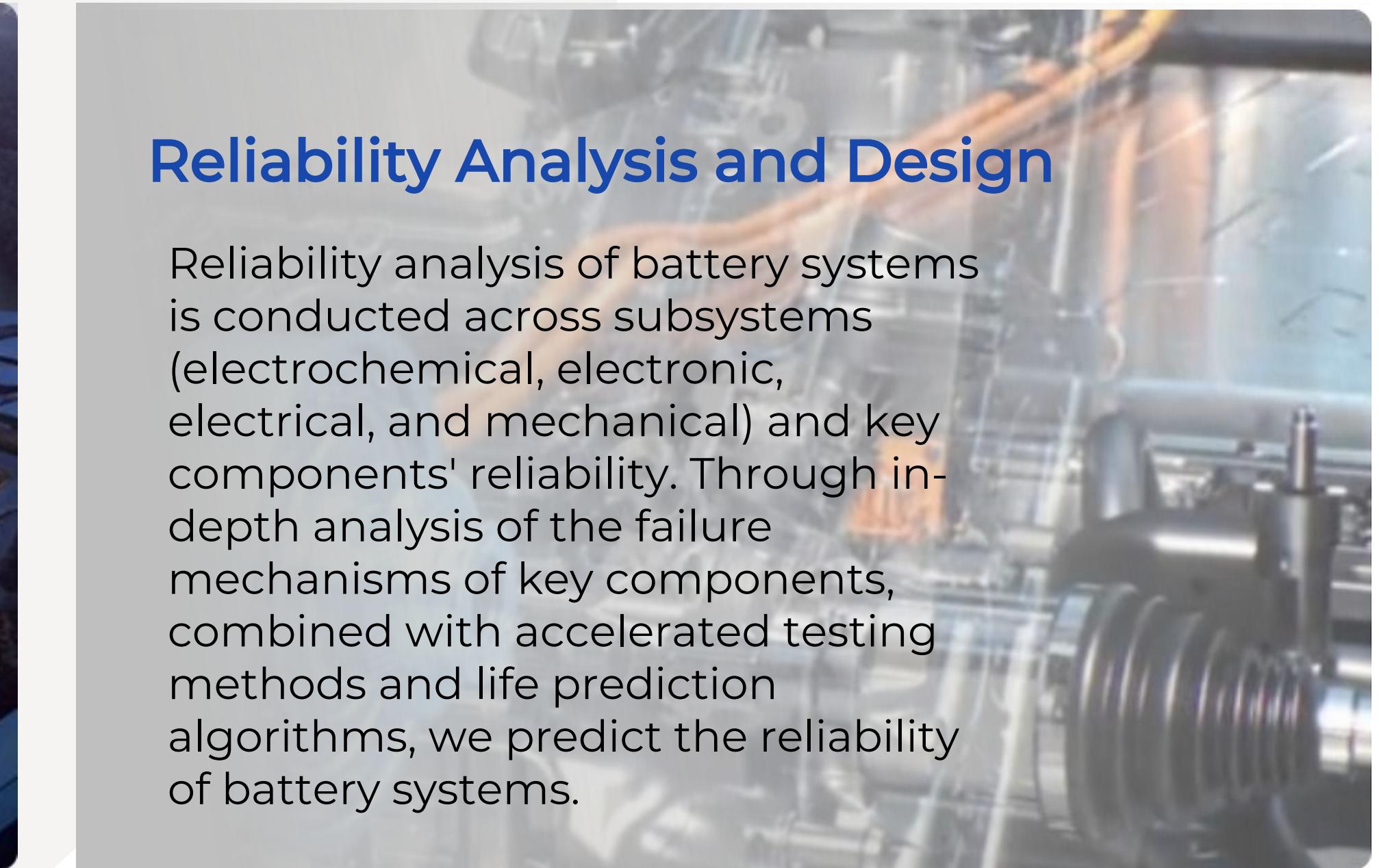
## Testing and Validation Center

We possess comprehensive testing and validation capabilities across all levels, from raw materials, key components, modules, and battery packs, to end-use systems. We are certified with CNAS/ISO17025 and IATF16949 qualifications.



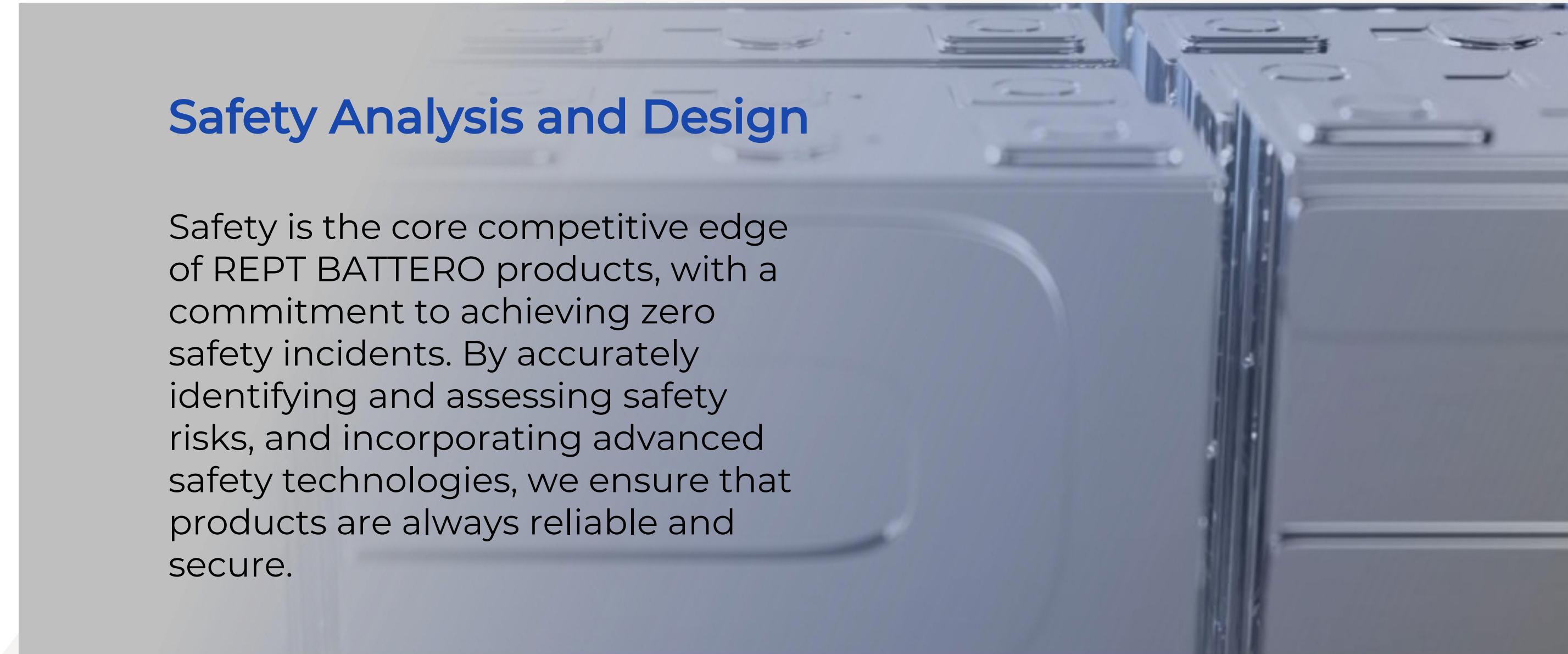
## Reliability Analysis and Design

Reliability analysis of battery systems is conducted across subsystems (electrochemical, electronic, electrical, and mechanical) and key components' reliability. Through in-depth analysis of the failure mechanisms of key components, combined with accelerated testing methods and life prediction algorithms, we predict the reliability of battery systems.



## Safety Analysis and Design

Safety is the core competitive edge of REPT BATTERO products, with a commitment to achieving zero safety incidents. By accurately identifying and assessing safety risks, and incorporating advanced safety technologies, we ensure that products are always reliable and secure.



## Standards and Certifications

We ensure our product solutions comply with regional standards and certification requirements, while actively contributing to and leading the development of industry standards.



Over 100 overseas product certifications

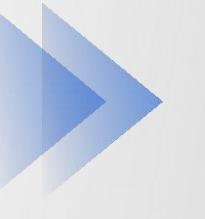


# Core Competence - Top-tier Technology Center

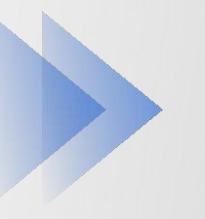
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The hardware configuration and capabilities of our technology center fully meet standard requirements and address the needs of customers in sectors such as automotive and energy storage.

## Continuous Investment in R&D

	3	300 million+	30,000m <sup>2</sup>	2,500+
	R&D Base	Equipment Investment	Building Area	Equipment Units

## Standards and Patents

	4,050+	2,480+	950+	120+
	Global Patent Applications	Global Patents Granted	Invention Patent Applications	PCT Patent Applications

## Advanced Laboratories

	 2021: Certified by China's National CNAS Laboratory Accreditation	 2022: Obtained RheinTÜV Witness Laboratory Qualification Certificate	200+	20,000+
			Test Projects	Test Channels



## Innovation in Design and Intelligent Manufacturing

### Extreme Chip Design

- Multi-dimensional Solid-Liquid Interface Design Technology  
Enhanced the Activity of Dual High Electrode Foil
- Production management  
Utilize the intelligent control system to adjust the equipment parameters according to the production data.
- Quality control and management  
Intelligent manufacturing, quality control and management throughout the whole life cycle, and cross-departmental collaboration mechanism

### Extreme Manufacturing

- Powerful Single-Line Manufacturing Capacity  
> 10 GWh Annual Production Capacity
- Ultra-high-speed Automated Production Line  
50PPM Square Aluminum Shell Production Line
- Lean Quality Control  
> 6,000 Control Points & > 1,000 AI Monitoring

### Digitalized Intelligent Factory

- Next-generation Zero-Carbon Factory  
Smart Energy Management + Green Power Applications
- AI-driven  
Digital Twin + Advanced Manufacturing Models
- 30 GWh Single Super Factory  
30% Improvement in Space Utilization

## Self-developed Core Technologies for Outstanding Performance

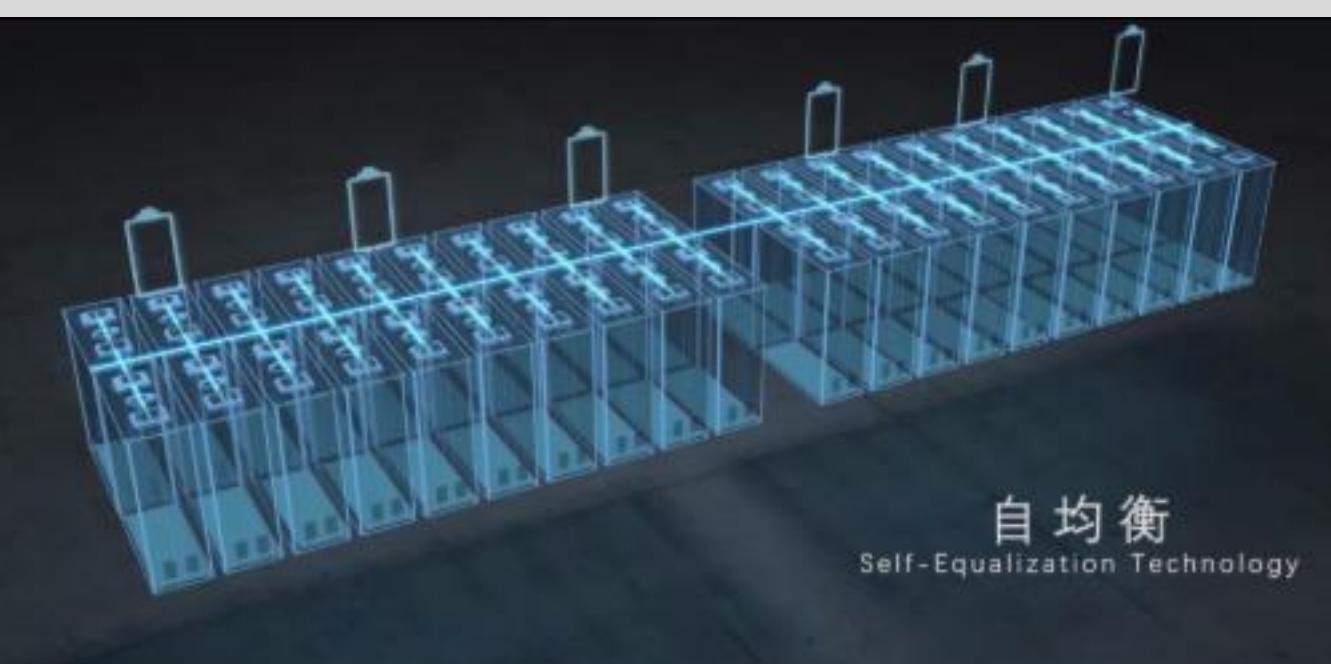
### "Twin Stars" Battery Material System

Core Performance: Overcoming the low-temperature "bottleneck" of phosphate systems, enhancing battery performance and extending its capabilities



### Internal Circulation Self-Balancing Technology

By using special additives in the battery, we can flexibly adjust the charge levels of different cells during charging, improving consistency in charge distribution.



### Independently developed CSU (Sampling) module

- Intelligent fast charging strategy
- Cell monitoring and detection
- Optimization of cycle life
- Residual value assessment
- Wireless communication & Cloud Intelligent Management BMS

### Meet multiple scenarios

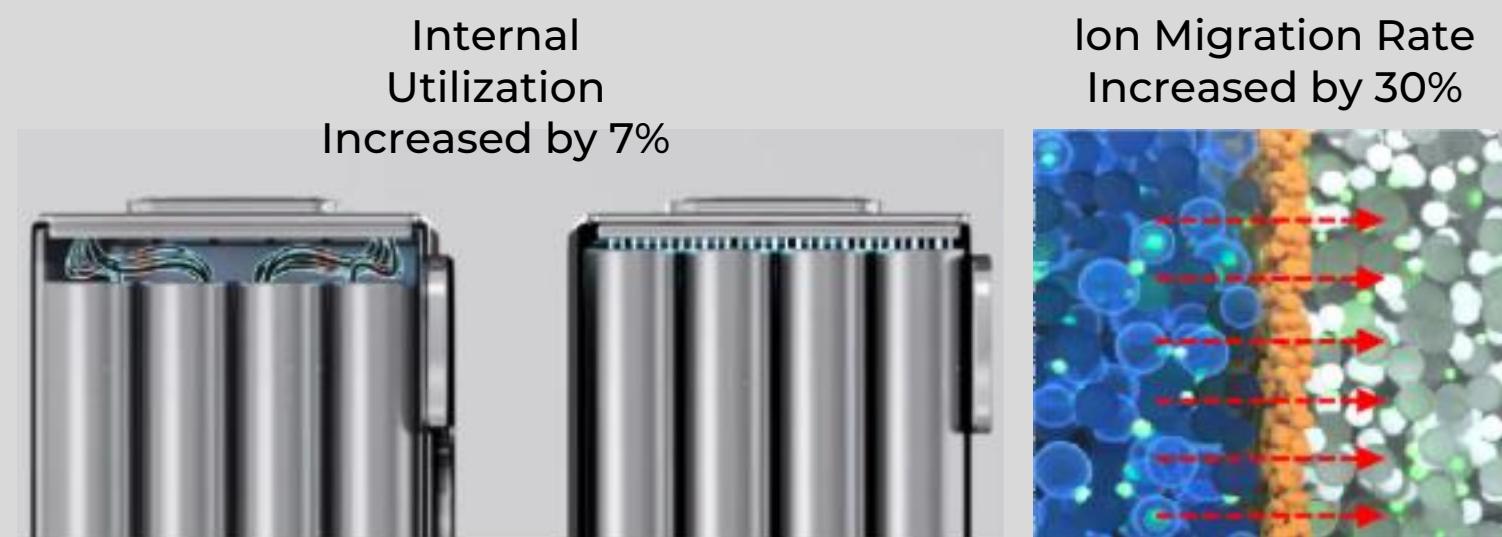
- Passenger vehicles & commercial vehicles & energy storage

### Meet the national standards

- It has passed the detection of GBT28046 environmental and electrical standards, and wireless communication is realized inside the battery pack.

### Winding Battery Technology

Featuring a Winding cover design and a fully integrated fixed Winding structure, this design enables an integrated connection of the internal cell structure, effectively improving space utilization by over 7%



Traditional Structure

Winding Structure

Dual High Solid-Liquid Interface Technology

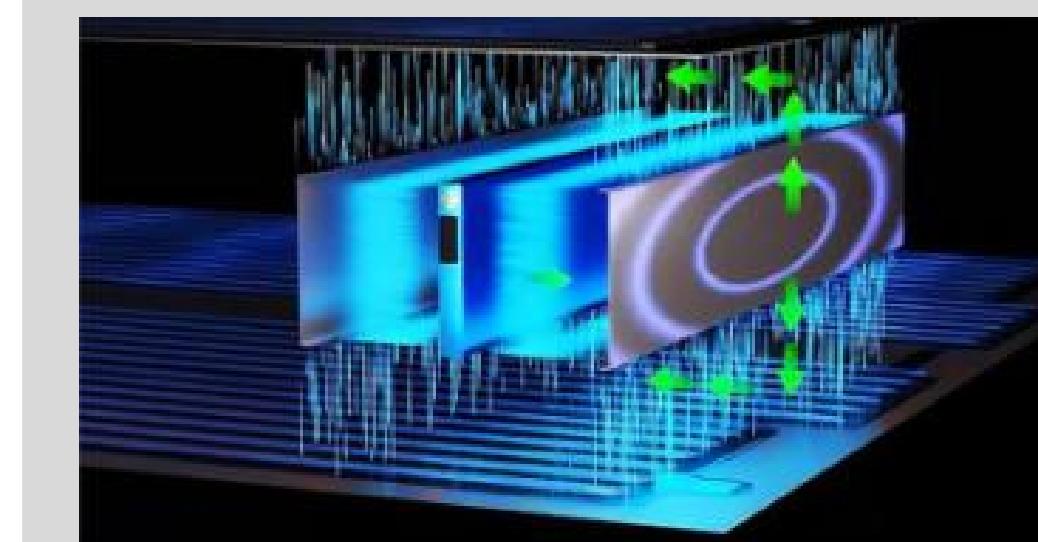
### Semi-Solid Technology

By combining solid and liquid electrolytes, we have developed a long-lasting, high-energy-density semi-solid battery system, significantly optimizing both volume and weight.



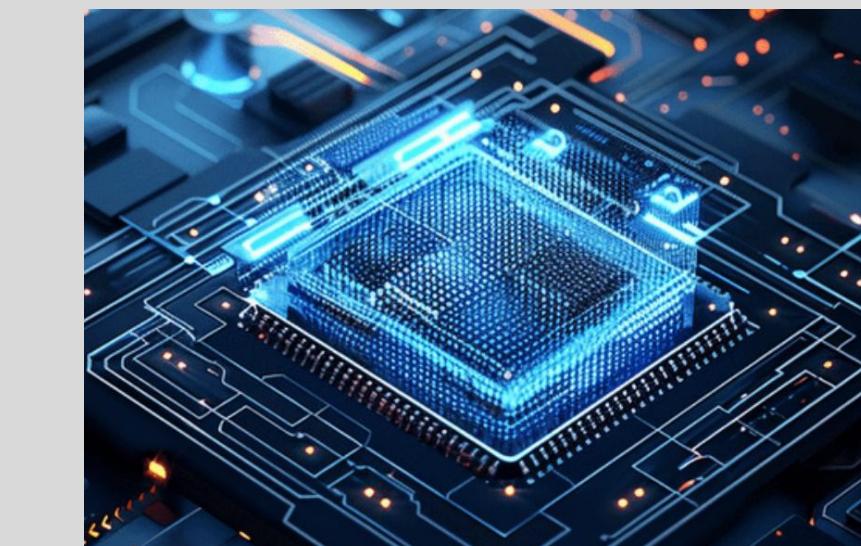
### Advanced liquid thermal management technology

Bid farewell to traditional electric heating. Achieve an integrated design of liquid heating and liquid cooling, and control the temperature difference of a single cluster within 5 °C, creating a friendly and consistent environment.



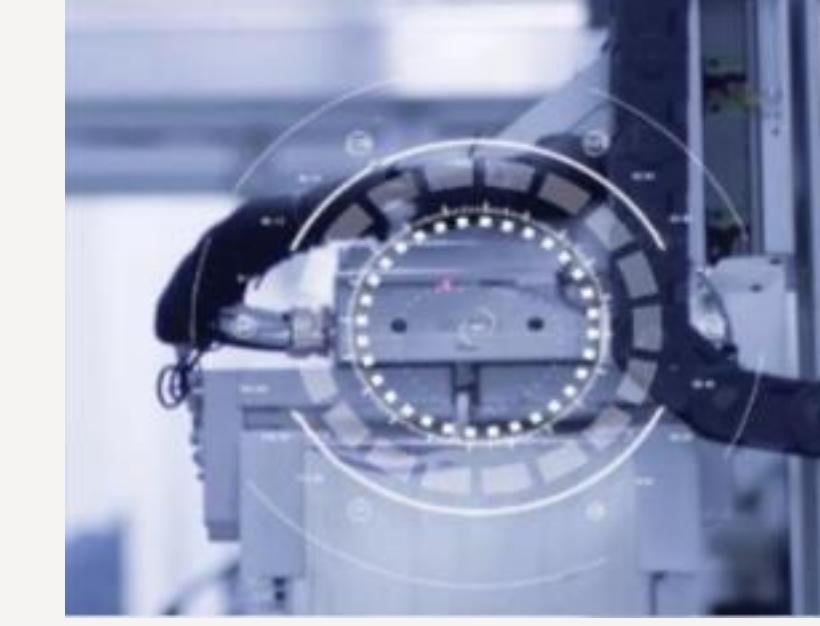
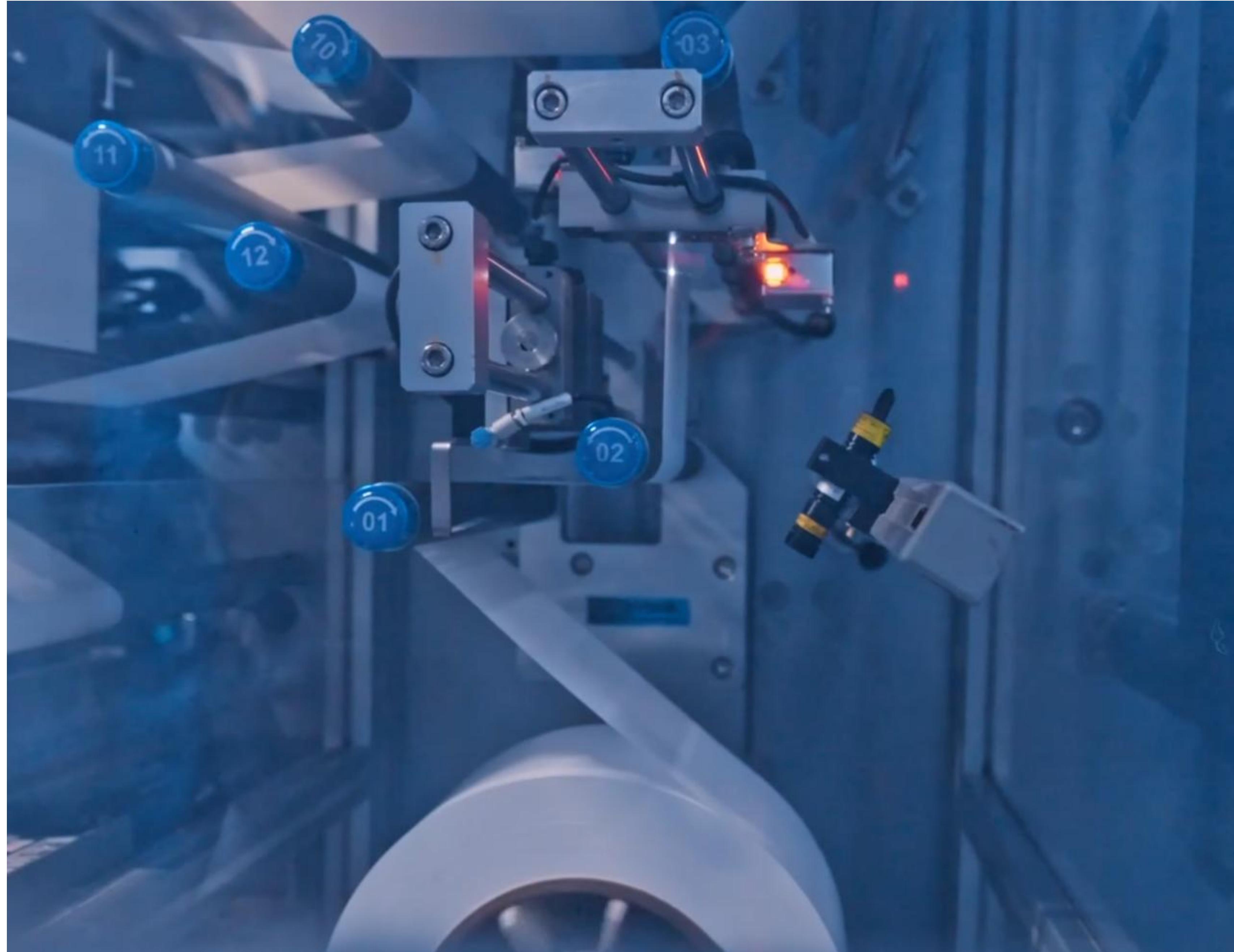
### 1500V high-voltage electrical safety

Solve the most dangerous high-voltage breakdown experiment, with a withstand voltage level of 5000VDC.



## QUALITY CONTROL

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46

3,000+

97

600+

Processes' data traceability from raw material intake to delivery

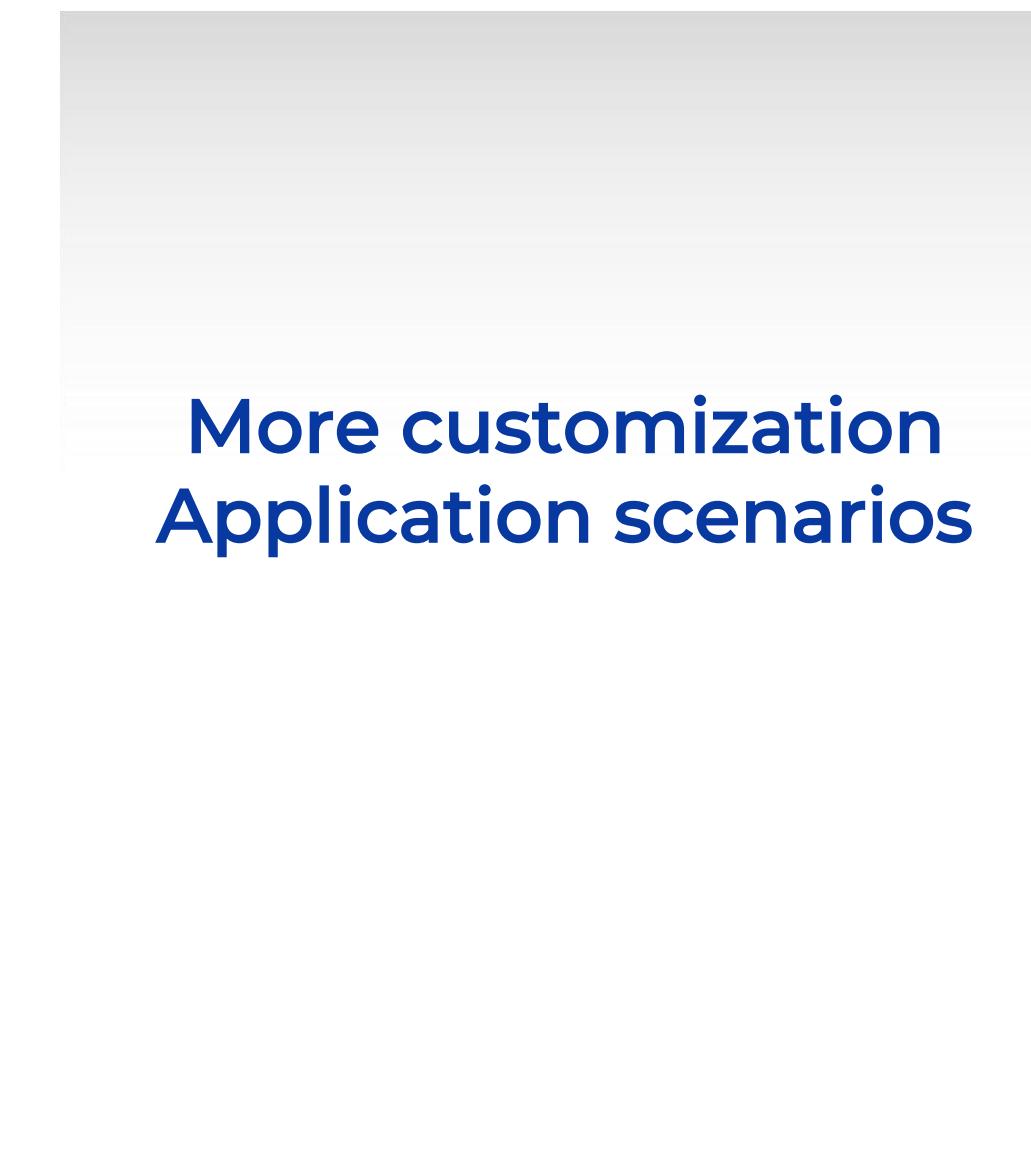
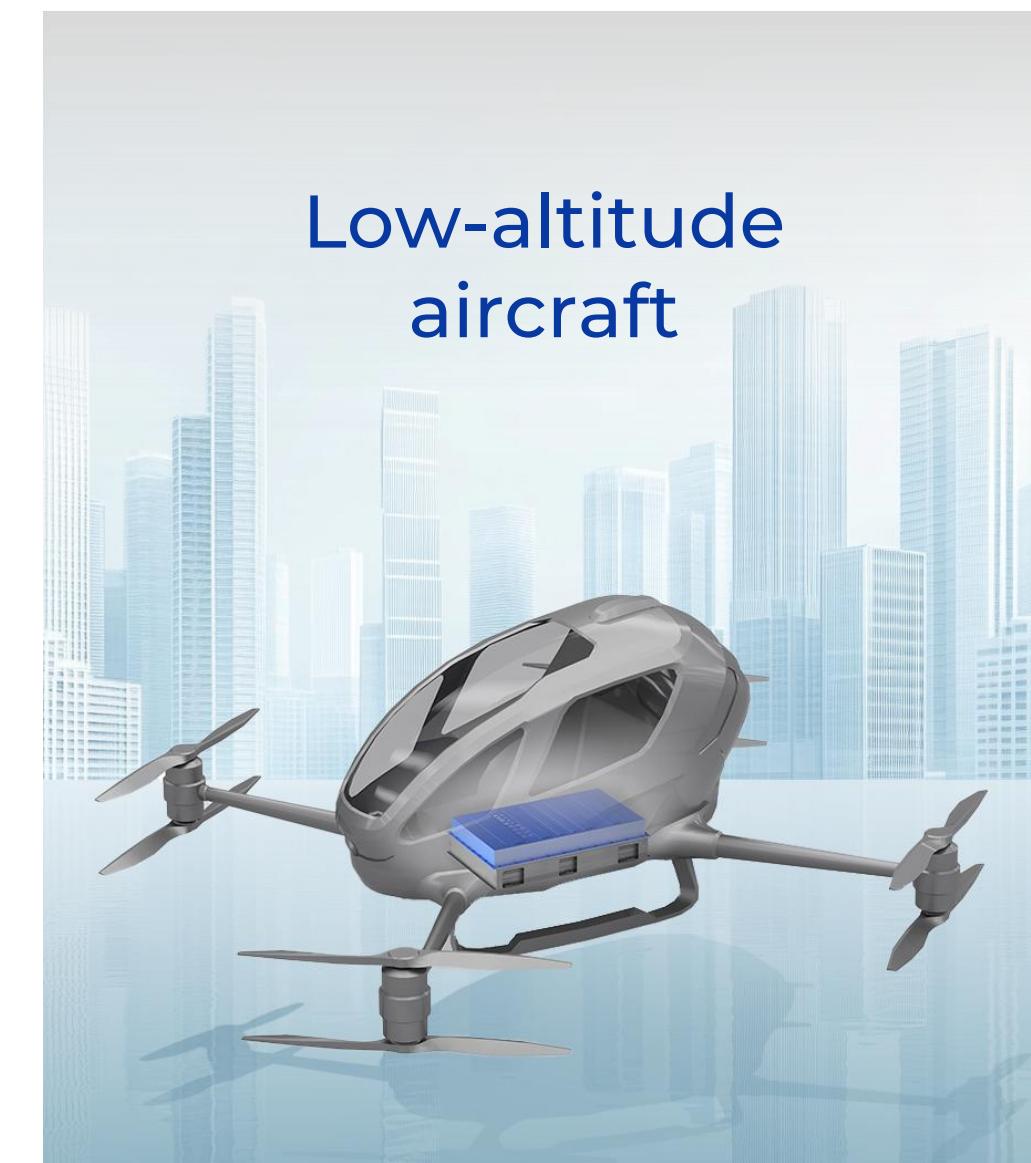
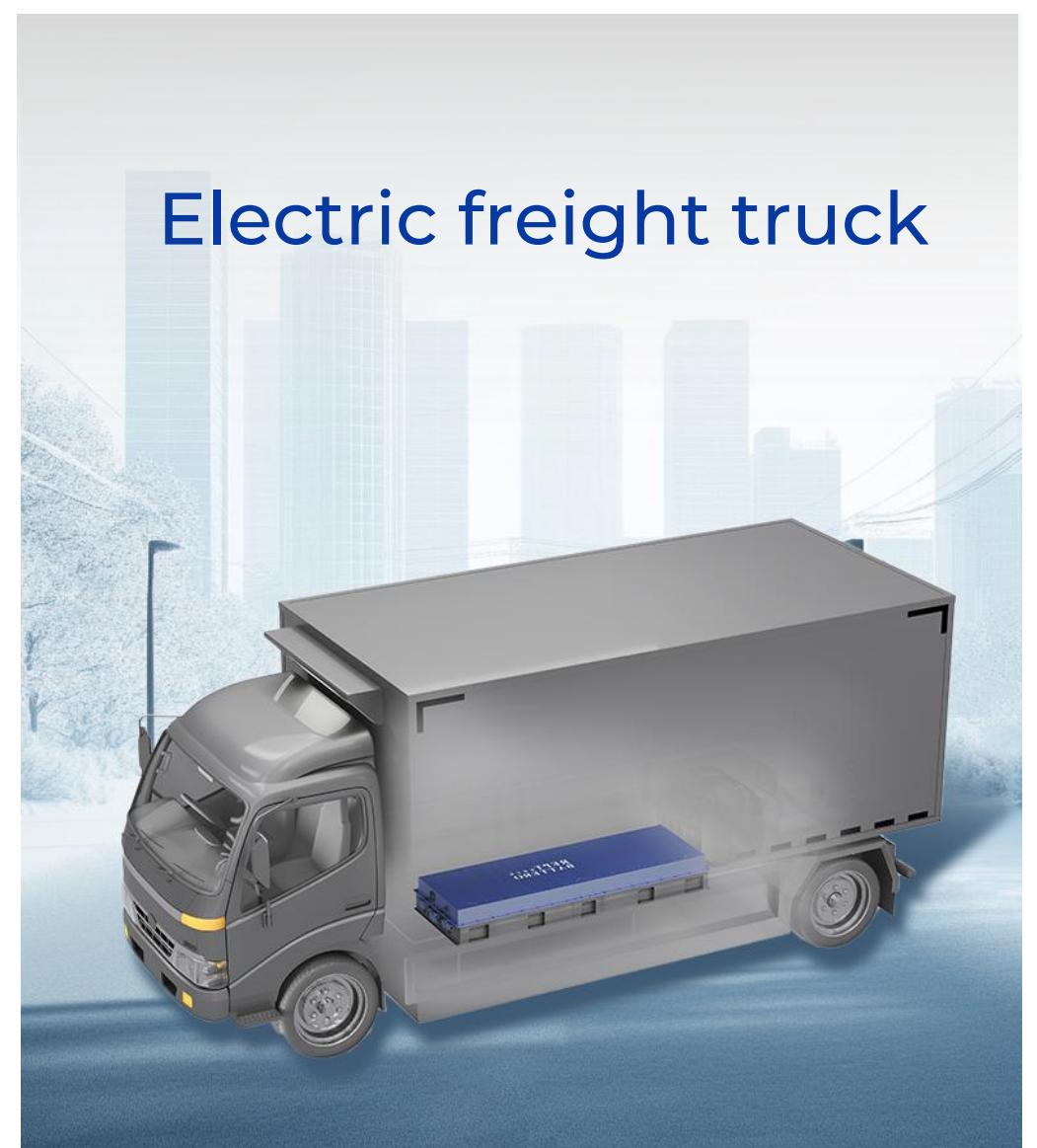
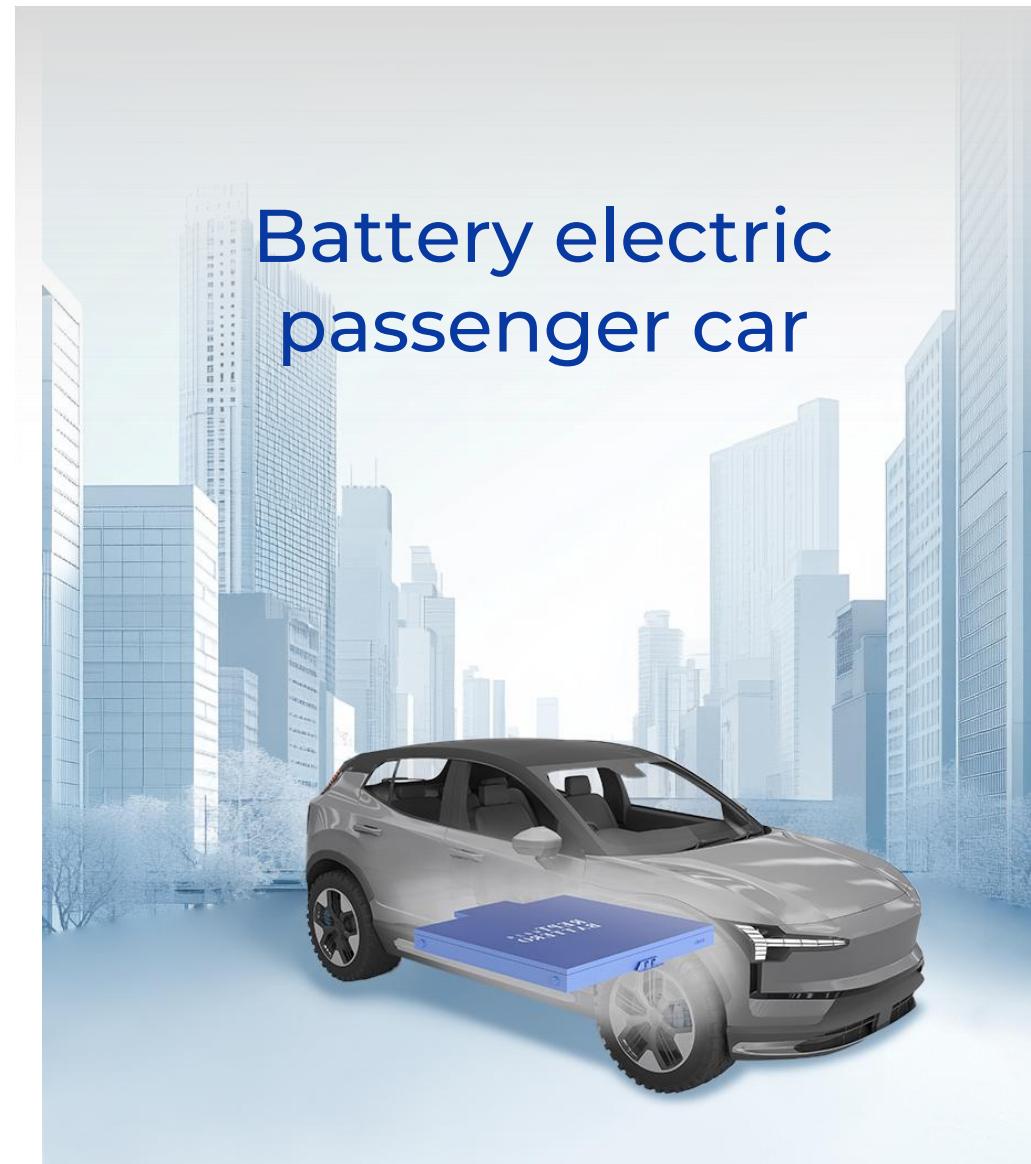
MES process control points monitored in real-time

Key and critical characteristic controls

Process control points in compliance with IATF16949 quality management system

# APPLICATION FIELD

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Comprehensive solutions driving the transformation and upgrading of energy structures.



Application Types	Application Purpose
Peak Shaving and Frequency Regulation	Assisting the grid in peak shaving and frequency regulation, stabilizing the power network
Spinning Reserve	Reducing standby unit activation time and minimizing waste
Black Start	Providing startup power for power plants
Renewable Energy Curtailment Utilization	Addressing the issue of wasted wind and solar energy
Coordinated Utilization of New Energy	Smooth output of new energy, enhancing penetration and tracking of planned curves
Energy Storage Stations	Peak shaving and frequency regulation, providing emergency power support
Backup Capacity	Addressing grid peak power demands
Distributed Micro-grids	Mitigating fluctuations in renewable energy sources
Time-of-use Electricity Price Management	Profiting from peak and off-peak pricing differences
Capacity Fee Management	Enhancing user self-balancing and reducing capacity costs
Energy Storage Charging Stations	Used for electric vehicle charging, resolving configuration capacity issues
Emergency Power Micro-grids	Enhancing the reliability and security of power supply



314~345~392Ah

WENDING CELL Large-capacity series



Super fast charging

WENDING CELL Super Fast Charging Series



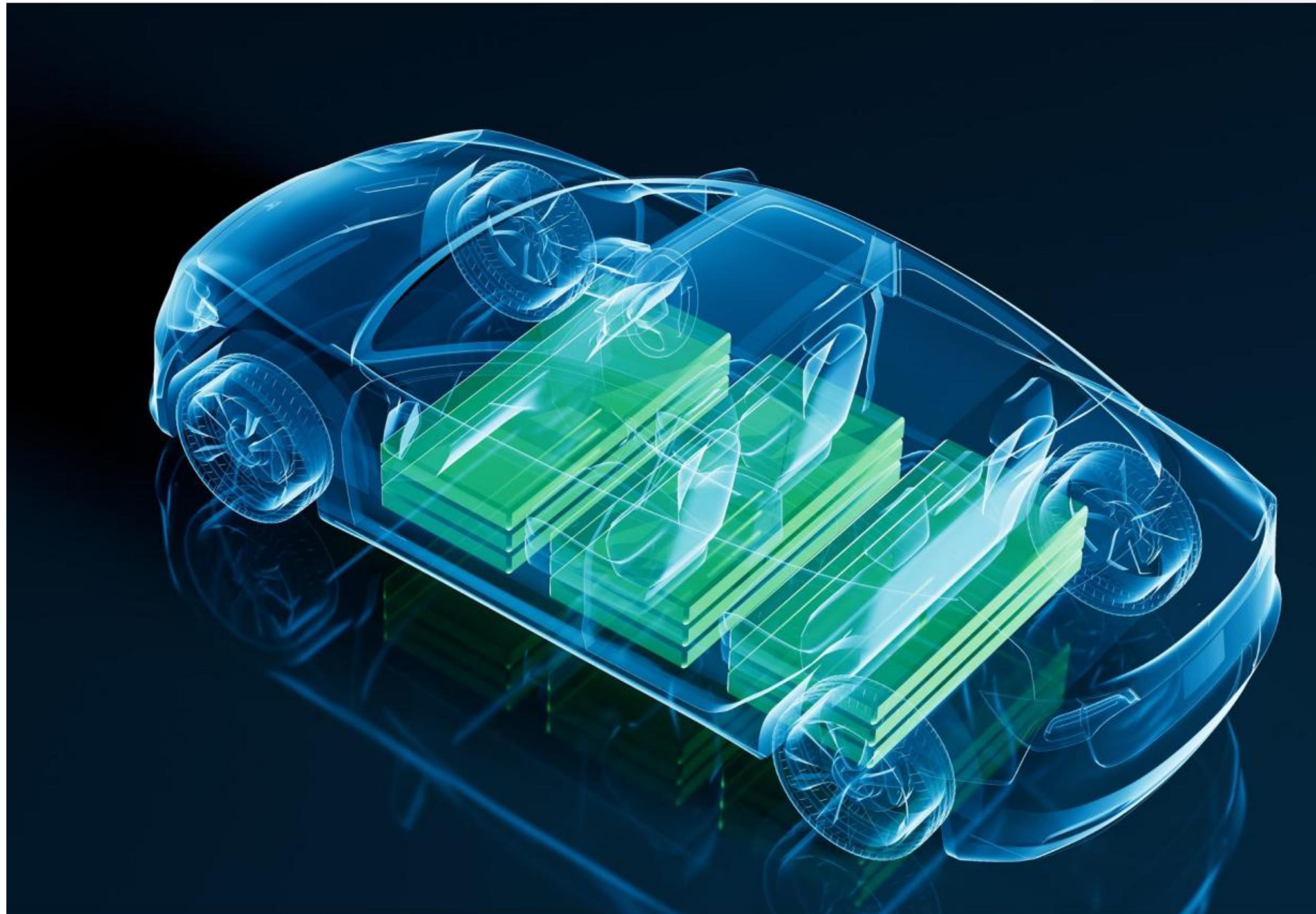
Super safe

WENDING CELL PHEV Series

# PASSENGER VEHICLE BATTERY PRODUCTS

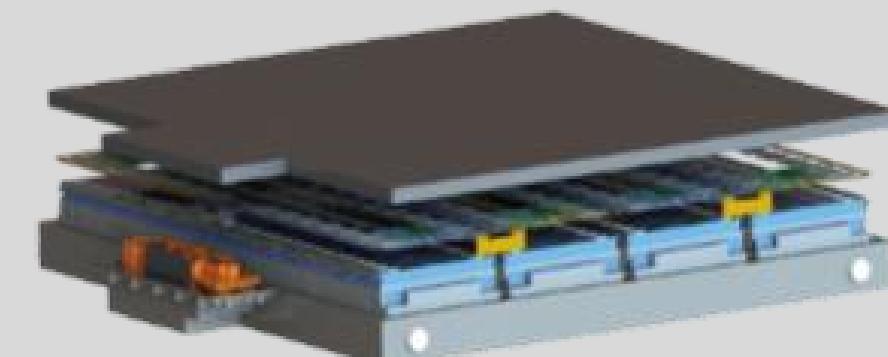
**REPT  
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The hardware configuration and capabilities of our technology center fully meet standard requirements and address the needs of customers in sectors such as automotive and energy storage.



## GREEN CTP PACK

Both the battery cells and the complete battery packs can be recycled for secondary use.



## BEV Battery system

Quick battery swapping



## PHEV Battery system

Save fuel and have excellent low-temperature performance.



## BEV Battery system

super fast charging



# COMMERCIAL VEHICLE BATTERY PRODUCTS

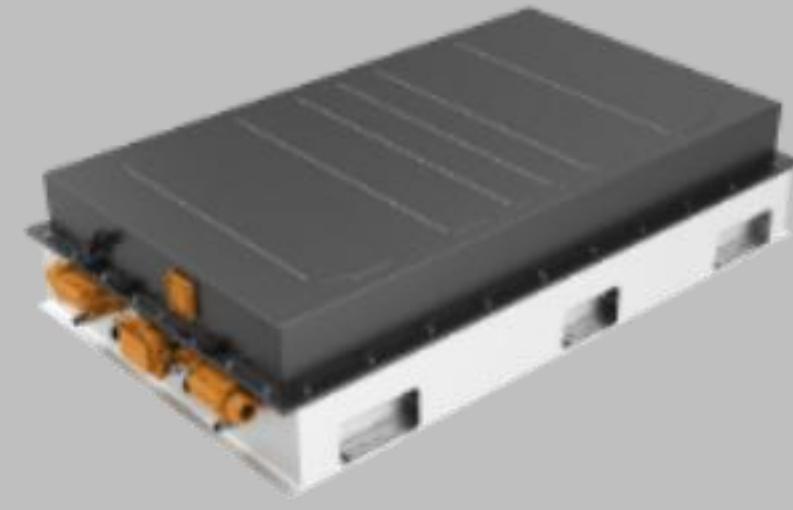
**REPT  
BATTERO**

The hardware configuration and capabilities of our technology center fully meet standard requirements and address the needs of customers in sectors such as automotive and energy storage.



Commercial vehicle battery system

Standard C-type box



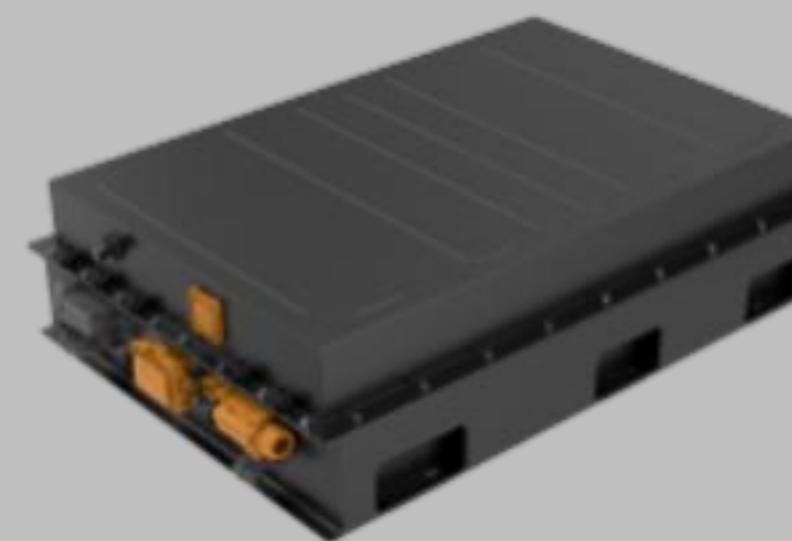
Commercial vehicle battery system

Standard D-type box



Commercial vehicle battery system

Standard G-type box



Commercial vehicle battery system

Standard F-type box



# R&D CAPABILITY

## Powtrix 1.0

### Y52 liquid cooled energy storage system

	Energy Storage Module	Energy Storage System
Group form	1P52S	10P416S
Nominal voltage	166.4V	1331.2V
Voltage range	130V~189.8V	1081.6~1497.6V
Nominal energy	46.592kW	3727.36kWh
Dimensions	1120*810*238	20HQ
Weight	~330kg	35t



Y52 liquid cooled outdoor cabinet

Y52 liquid cooled outdoor cabinet	
Group form	1p416s
Nominal voltage	1331.2V
Voltage range	1081.6~1497.6V
Nominal energy	372.7kWh
Dimensions	1.3m*1.3m*2.3m
Weight	3.5t

## Powtrix 2.0

### Y104 liquid cooled energy storage system

	Energy Storage Module	Energy storage System
Group form	12P416S	
Nominal voltage	1331.2V	
Voltage range	1040V~1500V	
Nominal energy	5015.9kWh	
Dimensions	20HQ	
Weight	45T	



Y52 liquid cooled energy storage module

Y104 liquid cooled energy storage module

## Liquid cooled integrated machine

Liquid cooled integrated machine	
Nominal energy	233kWh
Ambient humidity	5%~95%RH
Nominal power	125kW
Dimensions	1250mm×1350mm×2250mm
Weight	<2600kg

# APPLICATION SCENARIO

# REPT BATTERO



Wenzhou, Zhejiang  
Shuangyu project peak shaving and  
valley filling 14MWh



Jingneng Guangxi Baise  
Shared energy storage power station  
project 200MWh



Guazhou, Gansu  
12MWh Photovoltaic Energy Storage Project



Beijing Energy Inner Mongolia Tongliao  
Shared energy storage power station  
project 476MWh source grid side energy  
storage



Ningxia Huarun Haiyuan  
200MWh/400MWh



Yongchuan Songgai Project 400 MWh  
Chongqing Independent Energy Storage



Chongqing Three Gorges Yongchuan  
200MWh/400MWh



Morowali, Indonesia  
Power grid frequency modulation IMIP  
project phases I-IV 50MWh



Weda Bay, Indonesia  
Power grid frequency regulation IWIP  
project phase II and III 28MWh



Shache "project 800 MWh  
Xinjiang Photovoltaic Distribution and Storage



PG&E Project  
12 MWh Long Term Energy Storage in  
California, USA



St Gal Energy Storage Project  
226MWh FM energy storage in Texas,  
USA



Weda Bay, Indonesia  
Power grid frequency regulation IWIP  
project phase I 30MWh



Bulgaria 7.45MWh photovoltaic  
distribution and storage



The 'MY BESS' project  
Malaysia sample 3.7 MWh



North American FLEXGEN Shared Energy  
Storage Project  
Grid side energy storage 245MWh



The Waratah Super Battery project  
1950 MWh FM energy storage in New South  
Wales, Australia



Belgium project  
126MWh energy storage project



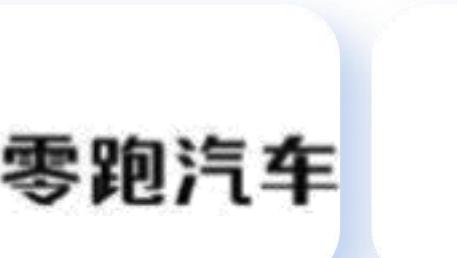
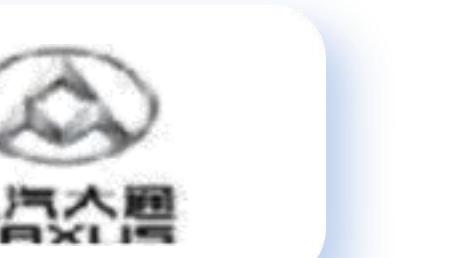
North American FLEXGEN Shared Energy  
Storage Project  
EV Charge Optical Storage Charging Project



Cascade Energy Storage Project 117.5MWh  
California, USA

# PASSENGER VEHICLE POWER BATTERY SOLUTIONS

REPT  
BATTERO

SAIC	上汽通用五菱 SGMW	NISSAN 东风日产	①	smart	VOLVO	STELLANTIS	②	一汽奔腾 BESTUNE	零跑汽车	上汽大通 MAXLUS
										
										
										
										

# PASSENGER VEHICLE POWER BATTERY SOLUTIONS

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SGMW BINGO (2023)



SGMW XINGGUANG (2023)



SGM BINGUO PLUS (2024)



SGMW XINGGUANG S (2023)



SGMW Cloud Sea (2024)



SGMW Yang Guang (2024)



SGMW MINI EV Macaron (2021)



SGM Cloud (2024)

# COMMERCIAL PASSENGER VEHICLE POWER BATTERY SOLUTIONS

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FAW Jiefang



SANY zhonggong



Shanxi Heavy Duty Automobile



JAC Motors

Application Models: Battery-swappable pure electric semi-trailer tractor  
Supporting Battery Cells: 230 Ah

Application Models: Sany iSEE2 Electric Dump Truck  
Supporting Battery Cells: 230 Ah

Application Models: Battery-swappable pure electric tractor  
Supporting Battery Cells: 230 Ah

Application Models: Battery-swappable pure electric flatbed transport truck  
Supporting Battery Cells: 230 Ah/324 Ah

# ENVIRONMENTAL RECYCLING SOLUTIONS

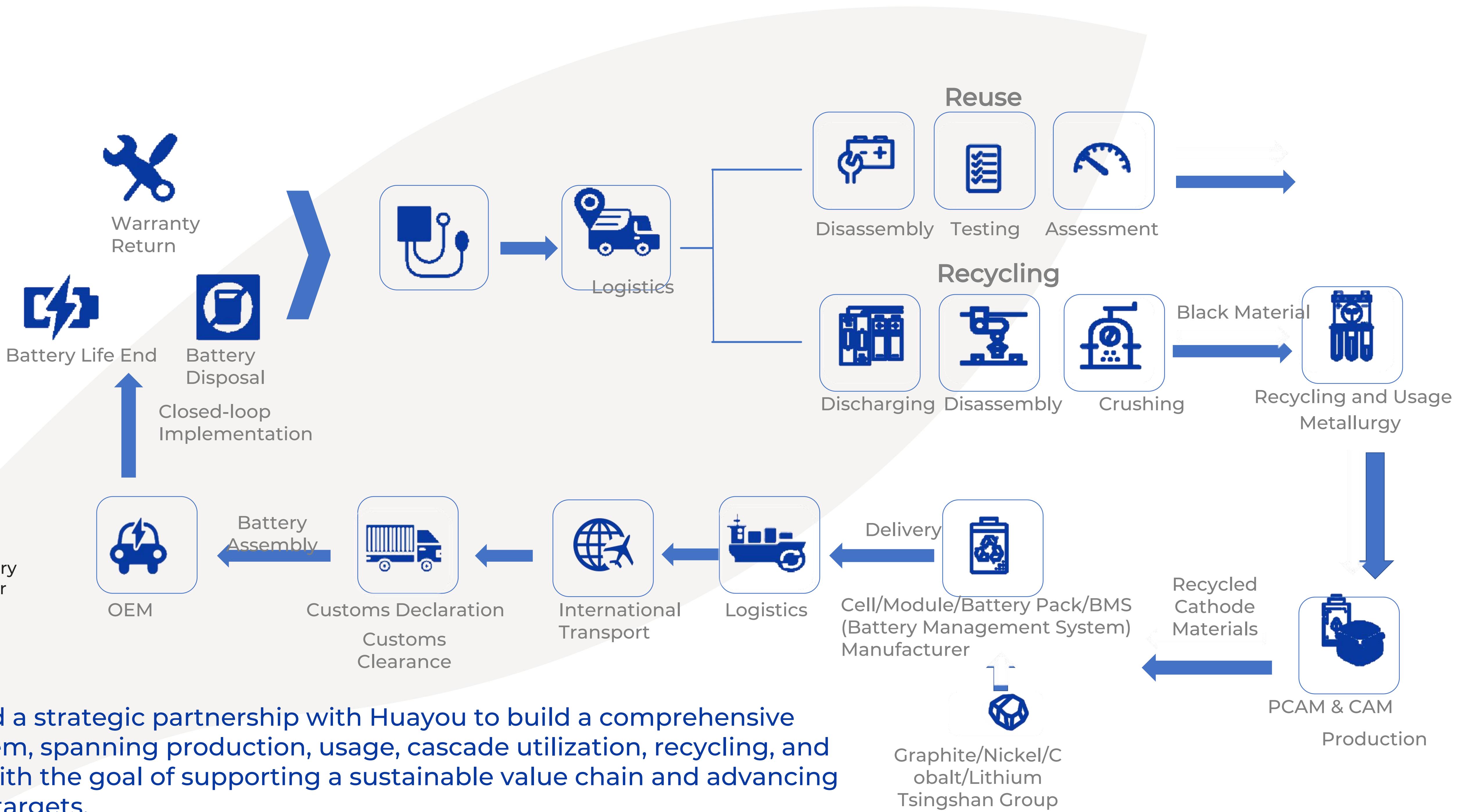
# REPT BATTERO

# Rapid Expansion of the Industry Chain

Tsingshan Group plans to expand across multiple segments of the lithium battery value chain through direct holdings or equity investments

# Resource Integration and Synergy

- Long-term stable supply
- Integrated industry chain
- Favorable business environment provided by market rules
- Backward integration of the industry chain to enhance bargaining power



The company has formed a strategic partnership with Huayou to build a comprehensive battery industry ecosystem, spanning production, usage, cascade utilization, recycling, and resource regeneration, with the goal of supporting a sustainable value chain and advancing global carbon neutrality targets.

# DEVELOPMENT STRATEGY

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Driven by Innovation, and building a first-class new energy company

Planned Production Capacity for 2025

90GWh+

Expected to Reach

Trillion-level Scale by 2027

R & D Center:

North America | Europe |  
China

Manufacturing Bases:

Wenzhou | Jiashan | Liuzhou  
| Foshan | Chongqing |  
Southeast Asia



## Wenzhou Manufacturing Base

Covering an area of 301 mu, the infrastructure construction of this place started in December 2017. Currently, the production capacity has reached 26 GWh. The base construction is now under planning, and the production capacity is expected to reach 30 GWh from 2024 to 2025.



## Jiashan Manufacturing Base

It was established in December 2020, with a planned annual production capacity of 30 GWh.



## Liuzhou Manufacturing Base

It is located in Liuzhou City, Guangxi Zhuang Autonomous Region, with a planned annual production capacity of 20 GWh.



## Foshan Manufacturing Base

It is located in Nanhai District, Foshan City, with a planned annual production capacity of 8 GWh.



## Chongqing Manufacturing Base

A project with an annual production capacity of 30 GWh of battery cells and PACK is set up. With a total investment of approximately 10 billion yuan, it has an annual production capacity of 20 GWh of battery cells and is supported by the construction of a PACK production line.



## Planned Manufacturing Base

Carry out the construction of green factories, and measure and supervise the carbon emissions throughout the entire life cycle of products. The Indonesian base is an important part of Ruipu Lantern's overseas industrial layout, which further enhances its global customer service capabilities.

# NEW ENERGY INDUSTRY CHAIN

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-  **Professional Training/Skill Guidance**  
Provide Expert Training
-  **Remote Monitoring/Maintenance**  
Online Technical Support Available Anytime
-  **Fast Response/Regular Maintenance**  
24/7 After-Sales Service Guarantee System
-  **Maintenance Stations/Spare Parts Warehouse Guarantee**  
Provide Optimal Safety Operation Guarantee



## EV Partners



### Passenger Vehicle Power Battery Solutions



## ESS Partners



### Household Energy Storage Users



### Commercial Passenger Vehicle Power Battery Solutions



### Large-Scale Energy Storage Users



# EXPLORE DIVERSIFIED COOPERATION MODELS TO LEAD THE DEVELOPMENT OF NEW ENERGY INDUSTRY

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BATTERO



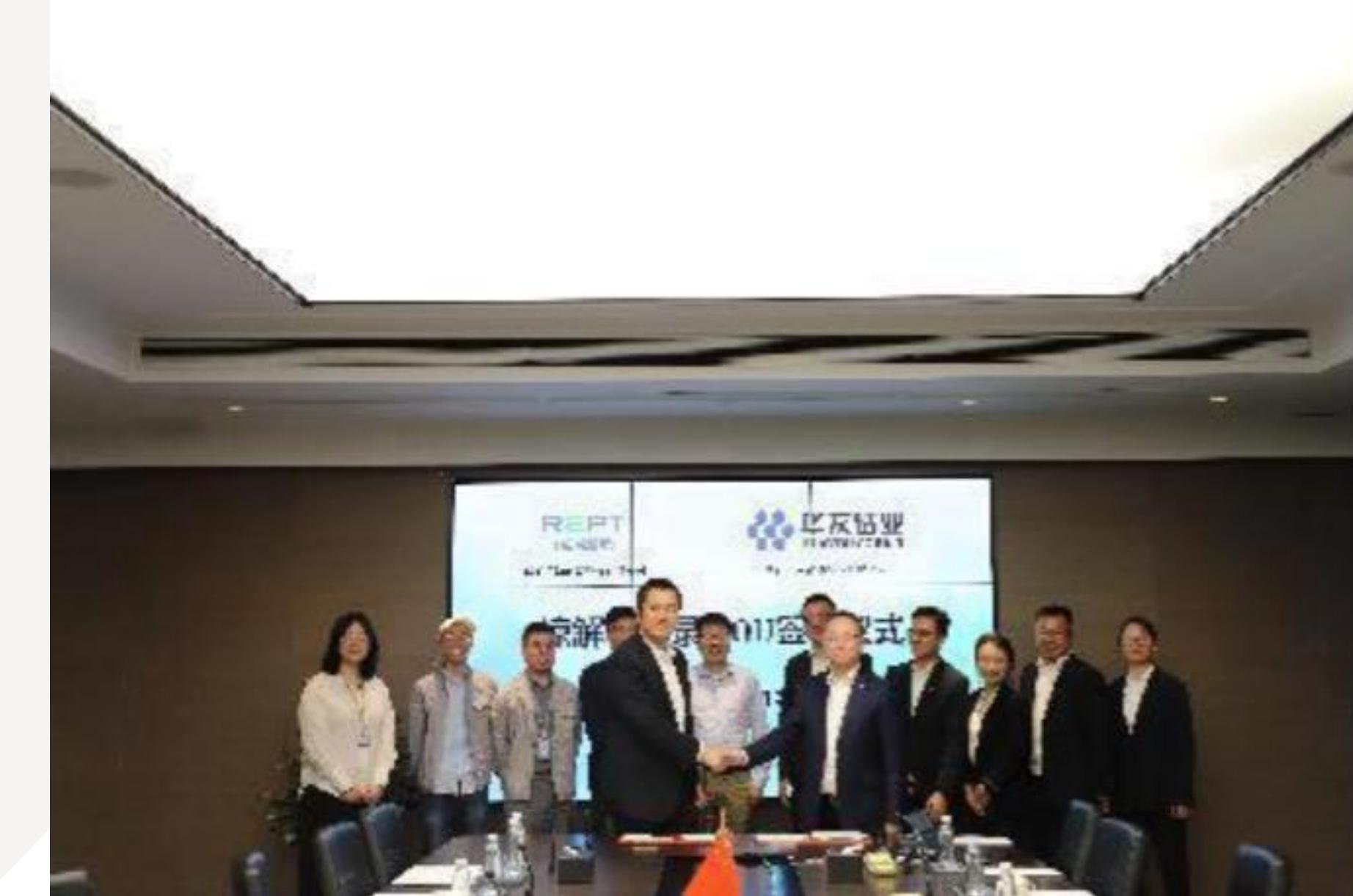
## Collaborative Development of Raw Materials

Globally, we are jointly developing upstream resources for new energy, including nickel, cobalt, lithium, and manganese, to support the industry



## In-depth Supply Chain Cooperation

With European Union OEMs, we provide a stable supply of raw materials and cost control advantages



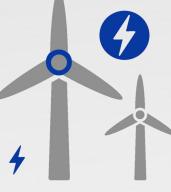
## Global Battery Recycling

We have established a strategic cooperation with Huayou Recycling for the global recycling of lithium batteries, promoting sustainable development

In recent years, REPT BATTERO has made significant strides in the new energy sector, continuously innovating in technological research and development. We have also actively pursued diversified collaboration models, securing key partnerships with renowned automotive manufacturers such as RENAULT, Stellantis, and domestic automotive giant SAIC. These collaborations will inject new momentum into the high-quality development of the new energy industry and open up vast prospects for the future growth of REPT BATTERO.

# HIGH ESG STANDARDS DRIVE SUSTAINABLE DEVELOPMENT

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Sustainable Management Strategy	
	Supply Chain Traceability Management 01
	Energy Utilization 02
	Battery Recycling 03
	Waste Emissions and Utilization 04
	Employee Production Safety and Health 05
	Corporate Social Responsibility System 06



-  Liuzhou Base was awarded Guangxi Zhuang Autonomous Region Green Factory 
-  Liuzhou Base was awarded Guangxi Intelligent Demonstration Manufacturing Enterprise 
-  Jiashan Base Jiaxing City Green was awarded Factory 
-  Wenzhou Base and Liuzhou Base were awarded National-level Green Factory 

We will establish a development system aligned with the United Nations Sustainable Development Goals, creating a safe and healthy workplace for all employees and a green, eco-friendly community environment to ensure sustainable and rapid growth.

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BATTERO

REPT Energy, Driving a Sustainable Future.