Compact Cars Corporation

Battery, Energy Storage & Management Systems

2024/2025

zzSMRT

YNEL

OEM Profile & Multi-Gigawatt Facility

Capacity	12GWh
Land Area	3466.66 Are
Annual value	US$1440 Million

YaoNeng New Energy Co., Ltd (YNEL) was established in Ganzhou, Jiangxi in 2021 and is affiliated with **Geely Group**, a Fortune 500 company. YNEL has been in full production in 2023.

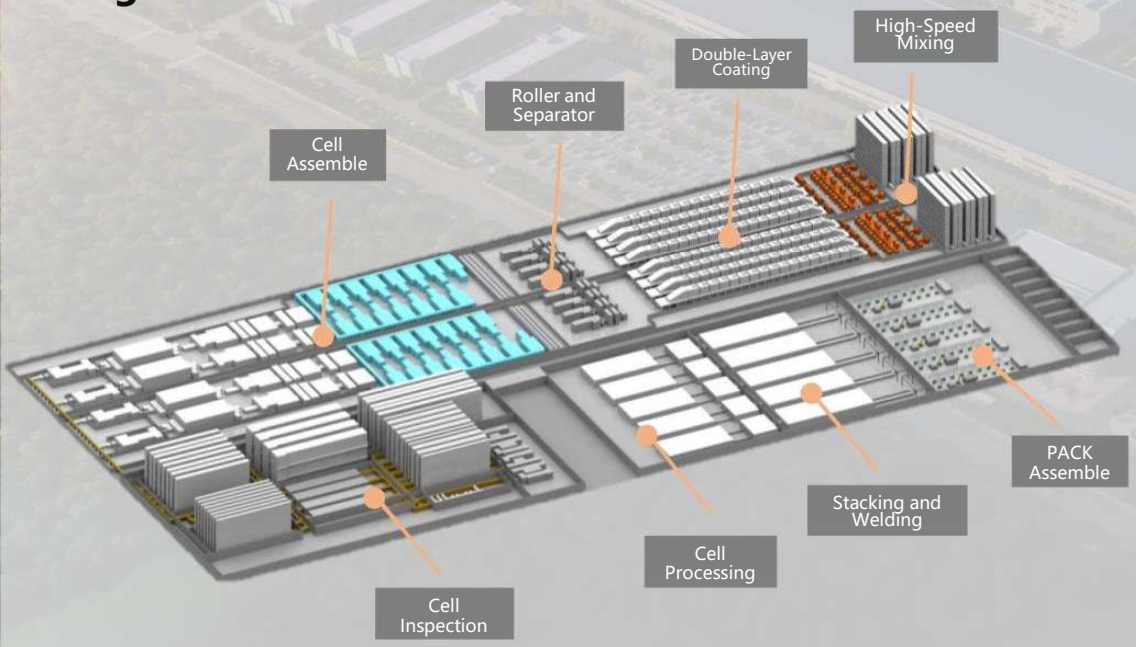
YNEL is committed to the R&D of lithium-ion battery systems, introducing international **advanced production standards, top manufacturing equipment, intelligent MES, SAP and MOM** systems to manufacture lithium-ion power battery cells, modules and PACK of different specifications to meet customers' requirements.

Agent of the Americas & Western Hemisphere Compact Cars Corporation, Canada and USA. Procurement, Sizing quality and other services related to the use and zz SMRT Ltd. Expertise in integration of Battery & Energy Management Systems. Including Hydrogen Fuel Cell infrastructure or vehicles.

Smart Manufacturing Factory

Industry 4.0 Intelligent Production Base

From raw materials to cells, and finally to integrated PACK formation



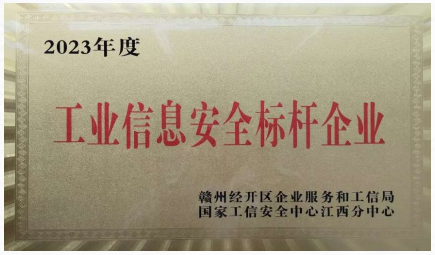
Automated, Info. and Intelligent, guarantee advanced tech and create high-end production capacity

With industry-leading configurations, 800 robots, the cell automation rate reaches a staggering 98.5%.

Comprehensive application of MES system, ensures info. traceability for up to 20 years.

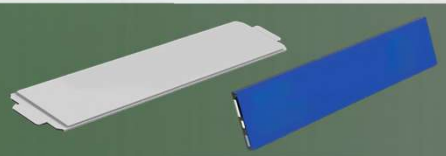
By introducing IoT and Big Data into the intelligent manufacturing system, we achieve intelligent inspection, intelligent logistics, intelligent judgment, intelligent processing, intelligent storage, etc.

Internationally Recognized OEM & Repeatedly Awarded



- National Intelligent Manufacturing Capability **Maturity Level 3 Assessment**
- Benchmark Enterprise in Industrial Information Security
- **2023** Annual “Beauty Factory”
- Advanced grass-roots party organizations
- Advanced Enterprises **2023**
- Organizing Committee of Jiangxi Regional Competition of "Bloom Cup" 5G Application Collection Competition
- Ganzhou May Day Labor Certificate

Main business and applications

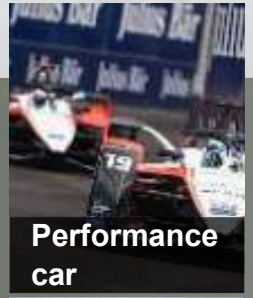


Cell

Module

PACK

Passenger vehicle



Performance car

Luxury electric motorcycle

Logistics vehicle

eVTOL

Energy Storage

Construction Machinery

Large Scale Energy Storage & Management

Industrial and commercial energy storage


Intelligent manufacturing


High voltage cable test


Logistics car charging station


Energy Management for commercial buildings


Energy Recycler


Photovoltaic power

Distributed energy storage


Large-scale photovoltaic power generation


Large wind power station


New power generation project


Grid substation


Large-scale grid energy management system

Certifications & Standards Excellence in Quality management

International Standards and certifications. Audited Quality.

YNEL has passed **ISO9001**, **IATF16949**, **ISO14001**, **ISO45001** and **ISO26262** international authoritative certification for the automotive industry and strict audits by customers. The maturity of quality management is gradually moving towards excellence.

Full Life Cycle Data Monitoring

Big data monitoring of the whole life cycle of production and after-sales products to ensure "zero risk“ ideal in the market.

2-year Module R&D Roadmap

	2021	2022	2023	2024	2025
Standard	• VDA355、390 • VDA590	 ~224Wh/Kg		 ~256Wh/Kg	 ~280Wh/Kg
Customized	• Modules for KA • Liquid Cooling Integration • Battery Management Unit Integration • Modular Design	 ~220Wh/Kg	 ~245Wh/Kg	 ~275Wh/Kg	

Comprehensive Testing Resources

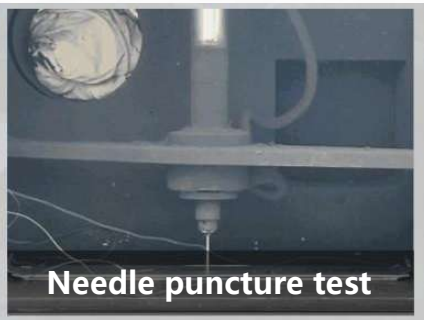
Recognized and audited Daimler, Volkswagen, and BAIC, etc.

- **13,00 ㎡** Testing Laboratory, **100+** Professionals, **800+** Advanced Testing Equipment.
- **160** test items comprehensively cover performance/reliability/safety testing for **All Products**.


Mechanical vibration


Cycle life


Seawater immersion


Needle puncture test


Electromagnetic compatibility


Thermal characteristics


LT Heating


HT/LT storage

Advanced Technology & Tooling

High-end Equipment, Precise Control, Comprehensive Inspection System

High-efficiency Mixer

The only manufacturer in the industry that uses a **3500L** high-capacity mixing cylinder for mass production of battery cells.

High-speed Coating Machine

Double-layer high-speed wide-width coating machine is a First-class automatic equipment in the industry, with a coating speed of **80 meters per minute** and a folding double-layer coating.

Continuous Rolling process for Neg

The first manufacturer in the industry to use a **1300mm** wide continuous rolling process, equipped with bending cylinder and arcuate rolling tech.

Punching & Stacking Machine

Using laser die-cutting for high-speed slicing with a punching efficiency of **≥300PPM**, and fully automatic "Z"-shaped lamination with a speed of up to **0.5s/pcs**.

X-ray inspection of Overhang

Using X-ray non-destructive tech to penetrate the interior of the cell, automatically analyzing and judging the coating dimensions of the cell.

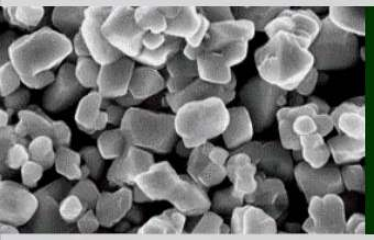
Ultrasonic welding

Using advanced ultrasonic welding, the first domestic manufacturer capable of welding soft-pack batteries with tab thicknesses ranging from **0.6-1mm**.

Ultra-long service life

Cycling schemes range 150 – 400 cycles
Capacity retention rate ≥80%.

Balancing mileage of 900,000 kms to 2.4 million kms. Addressing range anxiety.



Positive and negative electrode materials

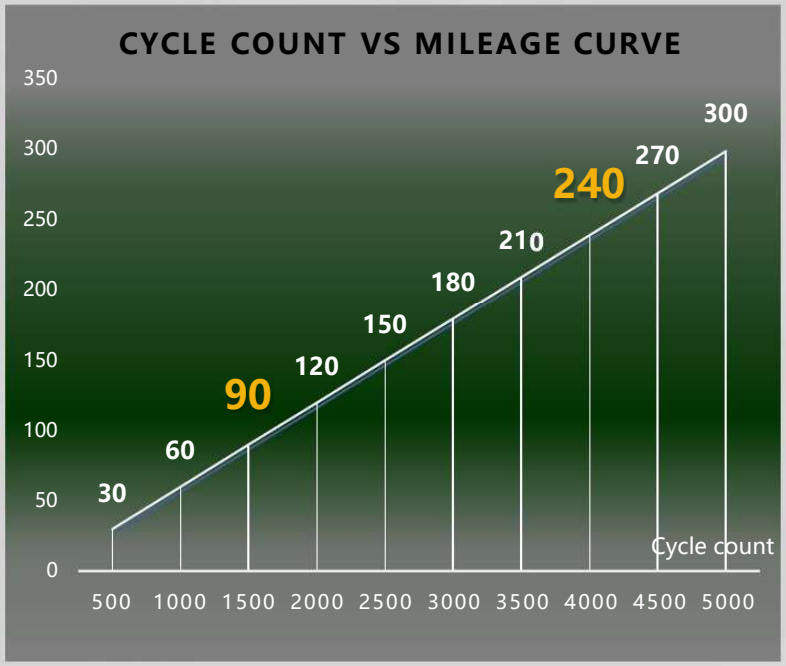
The positive and negative electrode materials utilize a special coating technology to enhance the stability of the interface and internal structure.

Long-cycle electrolyte

Containing SEI self-repair additives, ensures the long-cycle stability, significantly reducing internal side reactions and the growth of internal resistance within cell, guaranteeing cycle life.

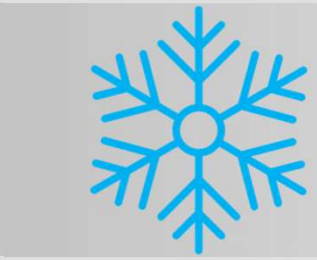
Advanced charging strategy

A multi-step charging strategy based on the EC three-electrode system, ensure no lithium plating.
Formulated a cell retirement strategy based on health status, maintaining safe usage over long cycles.



Low Temperature Performance

We have options!



Li-Fe-Po systems maintains 70% capacity at -20℃

- General usage and dependable, stable performance

Ternary Ni-Co-Mn operates near normally at -30℃ & Maintains 80% capacity below -20℃

- Superior to Li-Fe-Po, suited for High Performance & demanding cold applications.

Composite conductive agent

- Excellent conductivity, low IR and good LT DC and power PERF.

LT graphite negative Material

- Application of LT graphite Neg helps Rapid lithium ion deintercalation at LT, ensuring fast charging capability.

LT negative Binder

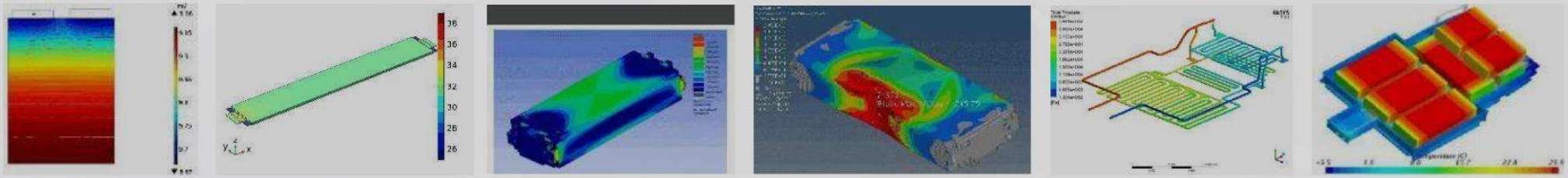
- LT Neg binder ensures good flexibility and strong adhesion of the Neg at LT, resulting in stable C&D PERF.

LT Electrolyte Solvent Formula

- Low melting point, low viscosity at LT, high dielectric constant, high ionic conductivity, low IR, and excellent fast charging PERF.

Full-system Simulation

Digitally driven, building a CSM across all domains



Utilizing simulation capabilities across multiple scales and physical fields, from cell to system, to support the development process from concept design to product delivery

Cell Simulation

- **Electrochemical Simulation**
- **Thermal Simulation, Thermal-Electrical Coupling Simulation**
- **Mechanical Simulation** (Compression, Needle Penetration, Drop Test, Expansion)
- **Safety Simulation** (Electrical Safety, Thermal Safety, Mechanical Safety)
- **Reliability Simulation** (Operating Window, Service Life)
- **Cell Design Optimization**

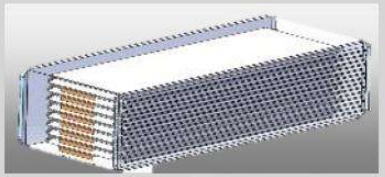
System Simulation

- **Thermal Simulation, CFD Simulation, Fluid-Structure Coupling Simulation, Thermal Management Design**
- **Mechanical Simulation** (Statics, Stiffness, Modal Analysis, Vibration, Fatigue, Compression, Impact, Drop Test, Collision, Expansion)
- **Safety Simulation** (Electrical Safety, Thermal Safety, Mechanical Safety)
- **Reliability Simulation** (Operating Window, Service Life)
- **Structural Design Optimization**

Ultra-thin Battery System

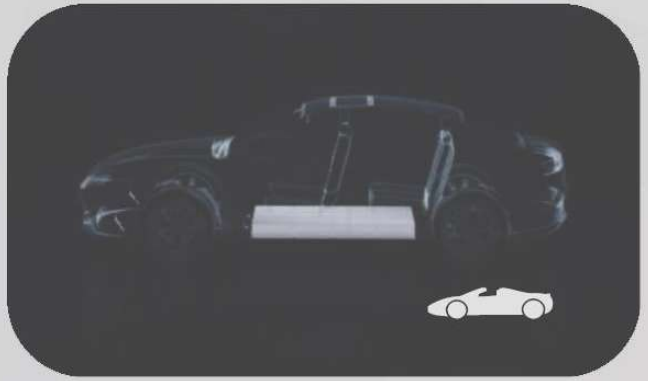
8 to145mm Variable Height , fully adaptable to supercars to MPVs

- The size and shape of the cells can be customized by product design and customer needs.



- This satisfies the spatial requirements of a wider range of vehicle models for power batteries, suitable for both the layout of flat battery packs and the modified layout of irregular-shaped packs for traditional vehicles.

- With the advantages of high energy density and flexible design, it can also be adapted to various types of electric aircraft.



Global Customer Relationships

Various Industries & products YNCL

Electric Vehicles

New Operations

Developing Business


Ask for the product catalog.
Send us your needs.
Join hands Worldwide.
win-win cooperation!
Serving the Globe & Manufactured in China
Contact: contact@CompactCarsCorp.Com

Superb Team & Management Processes

YNEL's management and technical teams are strong

- with more than 300 senior technical personnel
- the establishment of a technical centre, equipped with ultra-high tech and R&D capability.
- the integration of Geely's advanced management science and technology. A proven Process.
- A real drive to create the "perfect product".

Corporate Culture

Mission

Make batteries safer

Make the sky bluer

Vision

Becoming a respected manufacturer in the battery industry

Values

Seek truth & be practical

Strive for improvement

Collaborative innovation