

TRUCKS DELIVER LOVE

SANY Intelligent Heavy Truck Industrial Park

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WeChat
Public Account



SANY Electric Heavy
Truck Mini Program



SANY ELECTRIC HEAVY TRUCK
PRODUCT BROCHURE

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CARBON FOOTPRINT

Currently, it has expanded to all **34** provinces, municipalities, autonomous regions, and direct-controlled municipalities in China. Moreover, it has expanded its reach internationally, exporting to countries including the United States, Mexico, the United Arab Emirates, Jordan, Indonesia, Thailand, India, Russia, Mongolia, and others.

Strategic markets: Europe and Latin America.

DOMESTIC MARKET

OVERSEAS MARKET

STRATEGIC MARKET

- Sany Truck is the **first brand to enter the United Arab Emirates, Indonesia, and Singapore** in bulk with new energy heavy trucks.
- Sany Truck plans to establish joint ventures in Indonesia, the United States, Uzbekistan, and other countries.

SANY TRUCK

Sany Truck is the pioneer of Sany Group's digital and intelligent transformation.

At present, it has launched electric heavy trucks, electric light trucks, intelligent battery swapping stations, mobile energy replenishment stations, hydrogen energy heavy trucks, hydrogen production stations, hydrogen storage stations and diesel heavy trucks and other products. After four years of development, SANY's new energy heavy trucks have achieved the highest cumulative sales nationwide, becoming the domestic sales champion.

TOP 1

THE NO.1 BRAND
IN NEW ENERGY HEAVY TRUCKS

TOP 1

THE NO.1 BRAND OF TRUCK
ON THE INTERNET

THE NO.1 IN CHINA

MARKET SHARE OF SANY'S NEW ENERGY HEAVY TRUCK

*SALES RANKINGS BASED ON INDUSTRY TERMINAL COMPULSORY INSURANCE DATA



INTELLIGENT MANUFACTURING



In 2022, Sany Truck officially launched the intelligent heavy truck industrial park, investing over 22 billion yuan. This is Sany's first park fully driven by digital intelligence technology. The factory is fully equipped with 5G communications. The information efficiency is 10 times higher than that of traditional factories, allowing a truck to be completed every four minutes.

It is the most automated heavy truck factory in the world, with an annual production capacity of up to 300,000 units.



3 STEREOSCOPIC
WAREHOUSE



700⁺ AGV



200⁺ ROBOTS

PUSHING BOUNDARIES TOWARDS A LOW-CARBON FUTURE

Design for User Needs

1 Whole
Brain

3 Core Electrical
Components

4 Intelligent
Connections

8 Key
Advantages



1 WHOLE BRAIN

"TIAN JIAO " WHOLE BRAIN

The World's First Central Domain Control Technology

Hardware Hyperintegration

Software Intelligent Adaptation

Ultra-fast Transmission, Super Whole Brain



3 CORE ELECTRICAL COMPONENTS

FULLY FOCUSED ON INDEPENDENT RESEARCH AND DEVELOPMENT

Technology Leads the Intelligent
Manufacturing of New Energy Vehicles

First Innovation: MTB+MTC Ultra-integrated Battery Technology

Virtual modules are integrated directly into the vehicle battery frame
Higher Safety: A Breakthrough to Solve 35 Market Problems
a. Tower-type high-strength, low center of gravity, high modulus structure (less prone to rollover during turns)
b. Anti-condensation design

BMS Battery Management

Full life-cycle efficient energy release

Multi-Loop and High Capacity

a. Extreme Force: Increase in electricity release, boosting the motor's instantaneous power
b. High Power Maintenance: Even if one battery fails, others can continue to operate at high power, ensuring battery life

Innovative Intelligent Temperature Control & Integrated Thermal Management

a. Zonal heating and self-circulation (rapid and balanced heating)
b. Dual cooling unit (dual independent cooling and heat dissipation)
c. Blade vane cooling plate (rapid heat dissipation, uniform temperature)

Magic Body, Tower Stacking, and High-Strength Structure

Higher Energy Density Release

Small Size, Large Power: Energy density increased by 48%

Lightweight, Fast Charging: Battery weight reduced by 350 kg

Longer Life, Better Heat Preservation: Cycle life increased from 4000 to 4500 cycles

High Safety, High Reliability: Winter endurance improved by 50%

Low Energy Consumption, Intelligent Recovery: Heating energy consumption reduced by 30%, Multi-stage energy recovery up to 36%

World's First Innovation

XCU Central Domain Controller
Improves Performance and Manages Energy Efficiency

Coordinate 20+ groups of controllers
Directly solve over 20% of problems through software

High Integration

Hard Computation

Fast Response

Energy Saving and Upgrading

TIAN JIAO ELECTRIC CONTROL

HIGH CUBE ELECTRIC MACHINE

First Innovation: Dual Drive Axle
Torque Vector Control Technology
800V High Voltage Platform Integrated
Electric Drive Bridge
The Force Harvester Is Integrated with
the Electric Drive Bridge
Ultra-Efficient Lightweight Integrated
Electric Drive
Flat Line Motor Increases Power
Intelligent Shift Control

High Integration × High Power × High Torque = High Cube Electric Machine

Breaking the Limits of Kinetic Energy Conversion

High Integration → Lighter

Reduces excess parts in the transmission link, decreases losses, and improves efficiency
Reduces Weight by 300kg, Saves Space by 30%

High Power → More Energy-Efficient

Efficient conversion of electrical energy
The Charging Time is Reduced by 20%,
The Efficiency is Increased by 5%
The power Consumption is Reduced by 1%

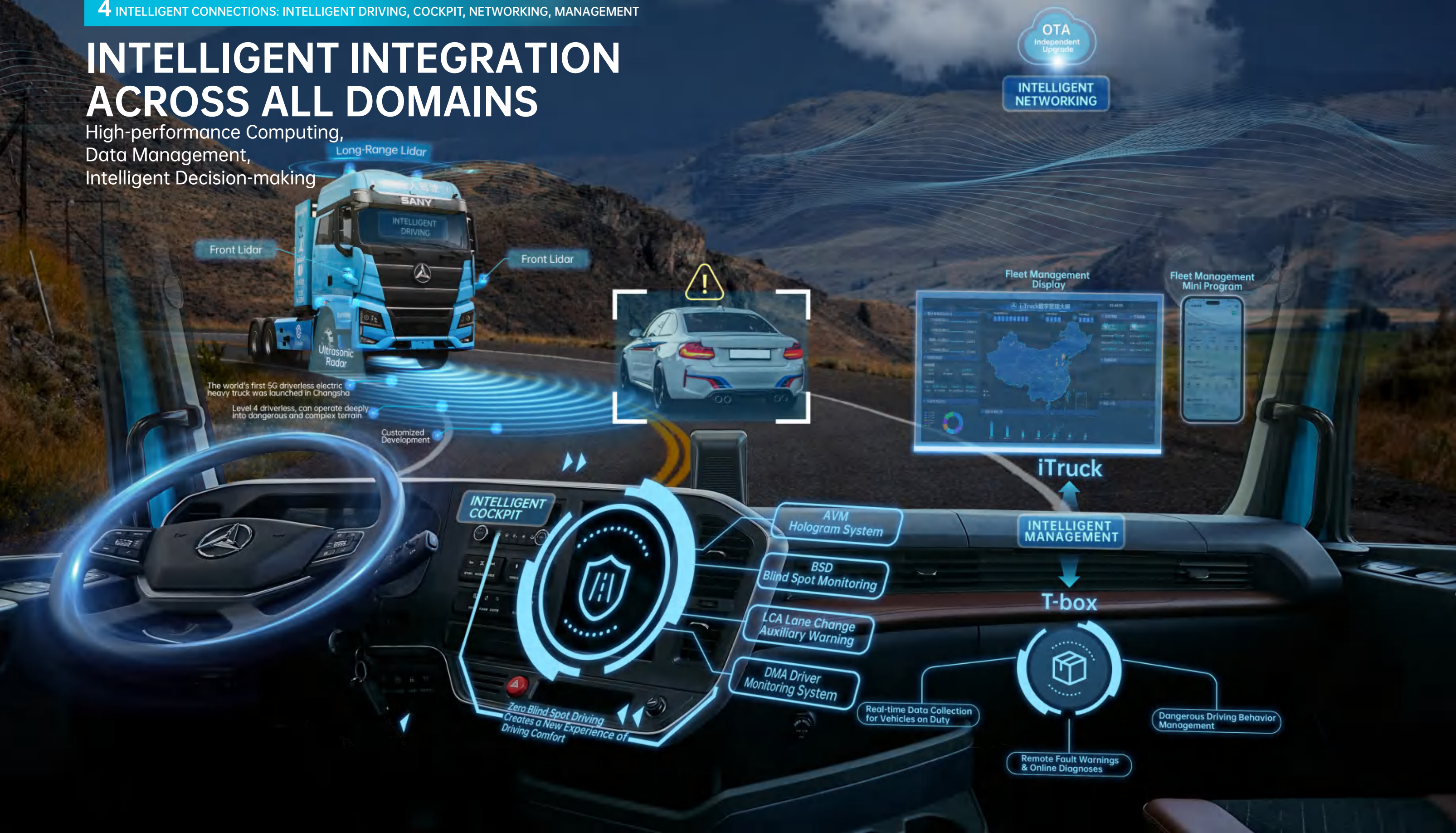
High Torque → Stronger

Features increased climbing ability, good performance in ice and snow conditions, and extended operating condition adaptability
Single Axle Output Maximum Torque 500Nm, Peak Power ≥250kW,
Torque ≥550Nm

4 INTELLIGENT CONNECTIONS: INTELLIGENT DRIVING, COCKPIT, NETWORKING, MANAGEMENT

INTELLIGENT INTEGRATION ACROSS ALL DOMAINS

High-performance Computing,
Data Management,
Intelligent Decision-making



8 KEY ADVANTAGES

ENVIRONMENTAL
PROTECTIONBenefit from Environmentally
Friendly TransportationFuel
Heavy
Truck

$$1 \text{ km} = 0.35 \text{ L}_{\text{diesel}}$$

$$1 \text{ L}_{\text{diesel}} = 2.63 \text{ kg}_{\text{CO}_2}$$

For example, if 1 heavy truck travels 150,000 km fully loaded each year

$$\begin{array}{l} \text{1 electric heavy truck} \\ \text{1 year energy saving:} \end{array} \quad 0.35 \times 150,000 = 52,500 \text{ L}$$

$$\begin{array}{l} \text{1 electric heavy truck} \\ \text{1 year to reduce} \\ \text{carbon emissions:} \end{array} \quad 2.63 \times 52,500 = 138 \text{ tons}$$

8 KEY ADVANTAGES

ULTRA-LONG ENDURANCE

Same Power Capacity Enables Longer Distance and Lower Energy Consumption per Kilometer



Guinness World Records recognized an intercity journey of **817.5 km**



Mota Battery Energy Density



48 %

Thermal Management Energy Consumption



30 %

Energy Consumption per 100 Kilometers < 135 kWh

Energy Recovery Efficiency > 36 %

8 KEY ADVANTAGES

MORE POWER LOWER ENERGY LOSS

Every Kilowatt-hour is Efficiently Utilized with Minimal Heat Loss

INTEGRATED THERMAL MANAGEMENT SYSTEM

- Utilizing advanced thermal management to reduce energy consumption
- Innovative waste heat recovery
- Integrated modules efficiently manage the cooling and heating circuits for air conditioning, batteries, motors, radiators, and condensers



High Cube Electric Machine increased continuous power by 7.4%

Intelligent multistage energy recovery, maximizing power efficiency.

30%

Excellent climbing and acceleration performance, with increased maximum climbing ability.

↑ 30 %

0-30km/h acceleration time < 4 seconds

Energy consumption at full load for 100 kilometers < 160 kWh

- 30 °C Low-temperature charging & heating, industry-leading cab defrosting performance

- 30 °C Industry-leading ultra-low temperature endurance performance

8 KEY ADVANTAGES

LIGHTER WEIGHT MORE LOAD

Lightweight Upgrades, Maximizing Load
Capacity for Higher Profits

1 ton less
weight

1 ton more
load

Topology Optimization

Material optimization | Battery enclosure materials reduced by ↓ 350kg
Structural optimization | Frame curvature design adjustment reduced weight by ↓ 20%

Hardware Hyperintegration

Electric drive bridge integration | Reduced weight by ↓ 300 kg, optimized space by ↑ 30%
Thermal management integration | Removal of redundant components

8 KEY ADVANTAGES

SECURITY & INTELLIGENCE

Remote Diagnosis, Active Prediction



Emergency Fault Di-
agnosis Management

Centralized Scheduling
Accelerated Response

Cope with
Unexpected Situations



RESPONSE ACCELERATION

- The XCU integrates more than 20 controllers, utilizing powerful computing to significantly reduce reaction time
- OTA independent upgrades significantly shorten software update and iteration cycles



COPE WITH EMERGENCIES

- First innovation of dual-source oil pump: In the event of a 600V oil pump failure, the 24V oil pump can be urgently activated to ensure safe steering and prevent overturning
- First innovation in FDM fault diagnosis: Continuous power supply during failures to maintain overall vehicle stability
- First innovation in throttle and brake double stop: Prevents rollback on uphill and forward slip on downhill

8 KEY ADVANTAGES

HIGH RELIABILITY

The First Batch of Delivered Electric Heavy Trucks has Achieved over 500,000 km of Driving Range, Setting a Record without Requiring Major Repairs



HYPERINTEGRATION

- **Reduced failure rate** | Ultra-integrated vehicle design reduces redundant parts, significantly lowering the likelihood of component failure.



STABLE RESPONSE: ADVANCED PREDICTION, REMOTE DIAGNOSIS

- Based on driving data analysis, provide early warnings of abnormal situations (such as speeding, overloading, violations) to reduce the probability of accidents.
- Cloud-based diagnostics reduce unnecessary offline trips, improving efficiency.



LOW LOSS: DUAL ASSISTANCE

- **Reduce brake pad wear** | Dual-stop system with throttle and brake, steady deceleration, and power-assisted braking for steep terrains (such as mountains and mining areas).

8 KEY ADVANTAGES

800 kW SUPER POWER FAST CHARGING

Extreme Challenge in Charging Efficiency



Dual-gun fast charging
Can charge to 60% in half an hour



Innovative four-gun fast charge
300 km range in half an hour



Can charge SANY and other brands
of electric heavy trucks

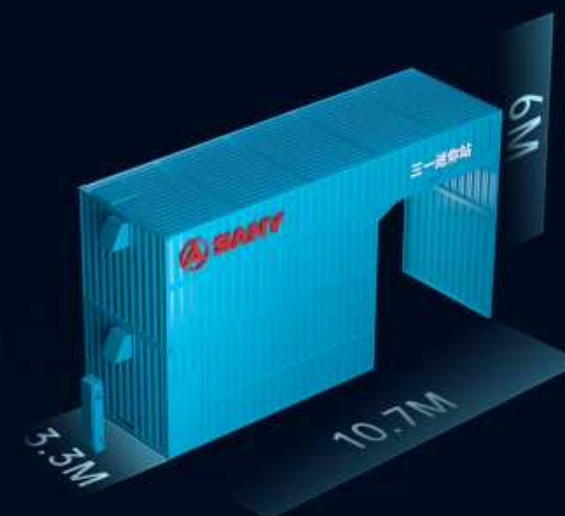


8 KEY ADVANTAGES

INTEGRATED STATION FOR CHARGING & SWAPPING

Integrated Charging and Swapping for Comprehensive Energy Replenishment

Construction Time < 99 mins



Covers an area of **Only 35 m²**

Compatible with all Models

Swapping Time < 5 mins



8 KEY ADVANTAGES

MOBILE CHARGING STATION

Flexible and Efficient, Versatile
Emergency Energy Supply

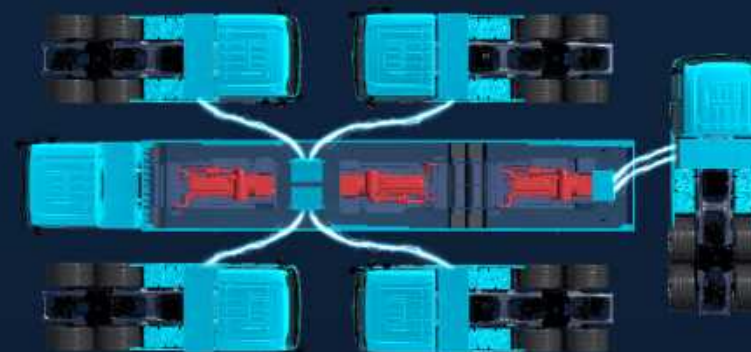
4 kWh /L, HIGH-ENERGY CONVERSION FROM OIL GENERATION

- With cost-effective diesel power generation, the energy efficiency of 400A charging can reach 4 kWh/liter
- Generator + charging control system, measured system power factor up to 0.99



SAFE, INTELLIGENT, AND HIGHLY RELIABLE

- One-key switch intelligent control system to avoid repeated mechanical operations: supports data query, fault self-processing, and self-diagnosis
- Automatic voltage regulation technology, AREP excitation technology, output voltage fluctuation $\leq 10\%$, stable power supply

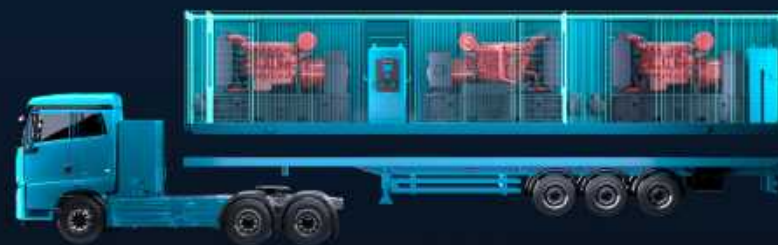


THREE UNITS FOR EFFICIENT ENERGY RELEASE, WITH INDEPENDENT CONTROL OF ENERGY CONSUMPTION

- Three sets of independent generator sets and charging piles. On-demand
- A 360kW high-power charging pile can support 250A single-gun or 500A dual-gun charging, with up to 12 hours of continuous energy release
- Up to 3 vehicles can be charged simultaneously with two guns, or 6 vehicles can be charged simultaneously with a single gun

FLEXIBLE CONFIGURATION WITH TRACTOR, FRAME TRAILER, AND CHARGING CONTAINER, ADAPTABLE TO VARIOUS SCENARIOS

- Each part can be configured independently, and the charging container can be used separately on the ground, without being restricted by the traction of body components
- Fast station construction: no construction period, low construction difficulty
- Emergency rescue: It is not limited by power resources and land resources, and can be operated deep in wilderness areas
- Temporary operation: high-frequency rapid energy replenishment for muck and building materials transportation
- Mid- and long-distance transport: can perform mid-range energy replenishment



8 KEY ADVANTAGES

DATA INTEGRATION & FLEET MANAGEMENT

Customize the Best Transportation Solutions for Each Fleet according to Logistics Industry Standards

REAL-TIME MONITORING OF VEHICLES ON DUTY



Total mileage and average mileage



Charging and power consumption



Operating area conditions



Maintenance and other comprehensive data

CLOUD PLATFORM INTEGRATION ANALYSIS

Automatically generate daily, weekly and monthly reports for analysis



DIVERSE SCENARIOS

STEEL TRANSPORTATION

Environmental protection and green transportation



COLLIERY TRANSPORTATION

Low failure rate, high uptime



PORT TRANSPORT

Short-distance transportation, low-carbon and environmentally friendly



BUILDING MATERIALS TRANSPORTATION

High chassis, strong trafficability



ELECTRIFIED TRANSPORTATION

Increased number of trips with lower energy consumption



EXPRESS DELIVERY

Extreme range, lightweight design



OEM DIRECT SALES

Direct Access Without Middlemen
Transparent and Honest

SERVICE

Create a high-quality, high-capacity "direct sales" iron army, standardize the visit process to effectively improve the quality of customer service, and provide customers with "1V1" personalized in-depth marketing services.

RESPONSE

The local branch company system builds an end-to-end sales and service triangle of marketing-R&D-service. The manufacturer dispatches directly, and the comprehensive response speed is faster; problems go directly to the main engine factory, and the manufacturer covers the entire product life cycle.

COST PERFORMANCE

Manufacturers directly connect with customers, eliminate middlemen, reduce costs, and provide cost-effective products to benefit customers.

MODES

Leveraging the strength of the manufacturer, we flexibly provide various sales models such as whole vehicle sales, separation of vehicle and battery, financial leasing, and joint venture operations according to customer needs.

VISIBLE

Relying on the factory-direct sales model, we open up information nodes throughout the entire process, achieving full visibility of order delivery and making delivery more secure.



OEM DIRECT AFTER SERVICE

1v1 On-site Direct Service
Lifelong Peace of Mind

OEM DIRECT AFTER SERVICE

Industry Exclusive: Breaking the limitations of time and space such as traditional service models, manufacturers directly dispatch R&D and service engineers to provide "one-on-one" butler-style on-site services.

Dedicated service: Dedicated personnel will respond to customer service needs, and designated service engineers will track the entire process; a dedicated team and accessories will accompany you, close to user needs, and handle maintenance issues promptly and efficiently; provide users with professional training on vehicle use, maintenance, etc. at any time.

TECHNICAL SUPPORT

More than 100 technical experts are on call throughout the year to provide customers with professional technical support.

LIFETIME PROTECTION

Active tracking: Provide multiple active services such as door-to-door visits, telephone return visits, and on-site tours throughout the entire life cycle from product delivery to operation and maintenance to ensure customer satisfaction.

Lifetime service: Provide standardized and unified after-sales service, original parts supply, and free technical support throughout your life.

SERVICE TEAM

More than 3,000 front-line maintenance personnel and nearly 1,400 service vehicles are on standby at any time.

EXTREMELY FAST RESPONSE

All year round: 365 days a year, 24/7 dedicated personnel accept repair reports, complaints, consultations, all-weather emergency rescue and fault repair services, and respond quickly within 15 minutes.

Own parts library: Each service engineer comes standard with a light truck mobile parts library, which greatly reduces waiting time and improves maintenance efficiency. Solve the problem once and for all, anytime and anywhere.

SPARE PARTS RESERVE

There are more than 30 powerful brand center warehouses, with a national parts reserve exceeding 100 million yuan. These warehouses cover major provinces across the country and hold more than 7,000 types of vehicle parts in stock.



QUALITY CHANGES THE WORLD