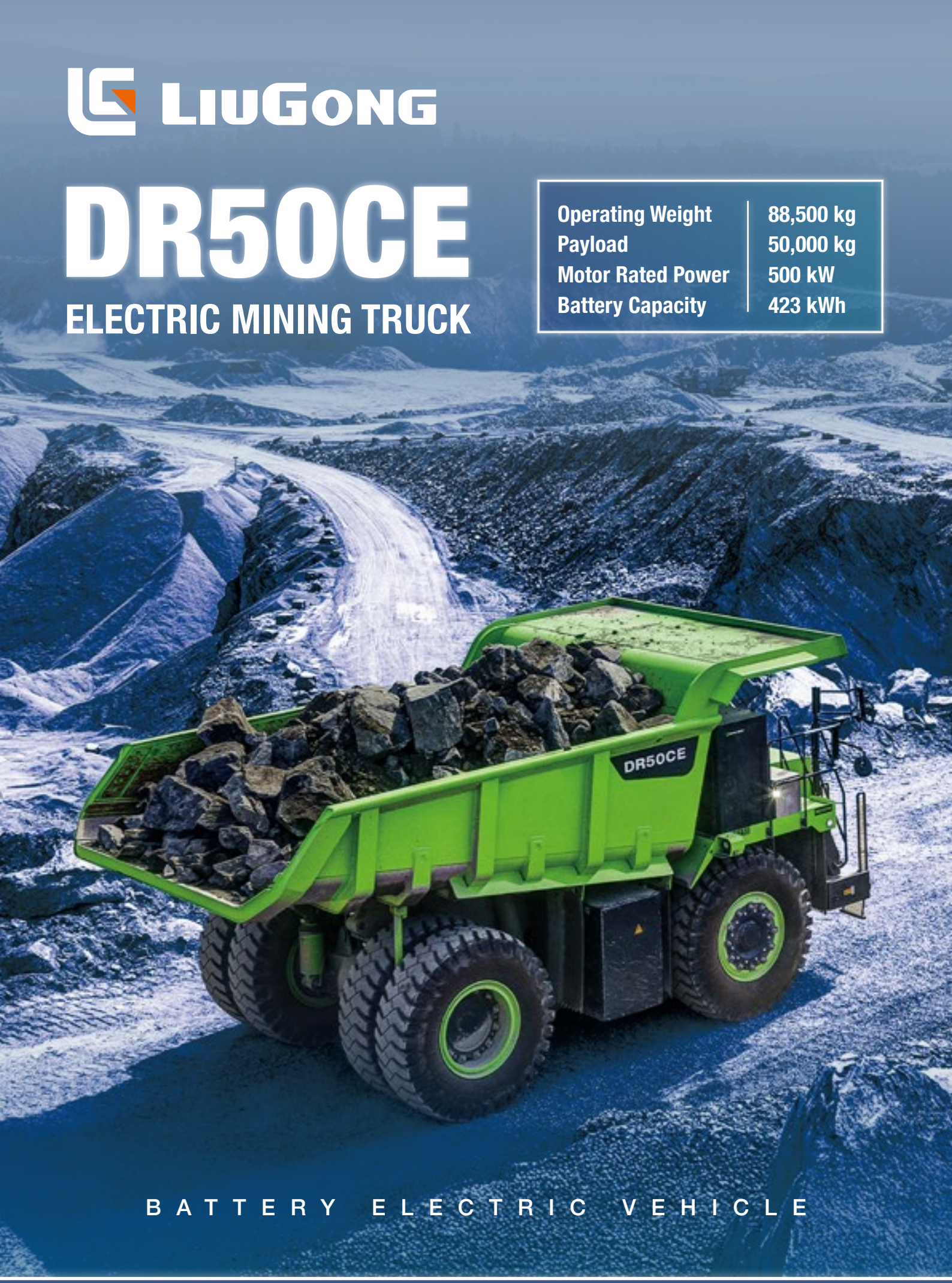
LiuGong

DR50CE

ELECTRIC MINING TRUCK

Operating Weight	88,500 kg
Payload	50,000 kg
Motor Rated Power	500 kW
Battery Capacity	423 kWh



BATTERY ELECTRIC VEHICLE

TOUGH WORLD. TOUGH EQUIPMENT.

CHINA LEADS THE WORLD IN BATTERY ELECTRIC VEHICLE TECHNOLOGY, AND WE ARE A LEADER IN CHINA

LiuGong is one of the first Chinese construction equipment manufacturers to identify the potential of battery electric vehicles in our industry.

Over the last 10 years alone, we have invested over $14 million in R&D, including product development and testing.

OUR BEV JOURNEY

2014
BEV project launched

2018
First BEV wheel loader and HEX model released globally

2019
Debut of BEV Products at Beijing BICES

2020
LiuGong launched its first generation of BEV WL & EX, setting a new industry standard in China

2021
LiuGong's first BEV truck launched

2022
Second Generation of BEV and LiuGong's first BEV skid-steer loader launched

2023
Established the BEV Branch of the Earthmoving Machinery Standardization Committee at LiuGong

2024
LiuGong's BEV motor grader launched

WE DELIVER A COMPLETE MINING SOLUTION

As a leader in battery-electric equipment, LiuGong is revolutionizing the industry with a comprehensive range of mining BEVs, covering large excavators, wheeled loaders, mining trucks, and more.

From surface mining to deep excavation, our advanced electric mining machines are engineered for efficiency, power, and reliability in the toughest conditions.

WHEEL LOADERS

EXCAVATORS

MINING TRUCKS

MOTOR GRADERS

TRUST OUR EXPERTISE TO HELP YOU CHANGE

We focus on cutting real costs for mining professionals, delivering near net-zero operating costs through industry expertise and intelligent machine design.

Our integrated solutions give customers the confidence to operate efficiently, knowing their equipment is purpose-built for mining applications.

NEAR NET-ZERO OPERATING COSTS

DR50CE

SMART POWER, SUPERIOR PERFORMANCE

ZERO EMISSIONS, MAXIMUM SAVINGS

- Zero emissions with exceptional performance, making it a sustainable, cost-effective choice for modern operations.
- Ultra-quiet at 103dB, with a cabin noise level of just 74dB, making it ideal for urban and environmentally sensitive sites.
- Intelligent temperature control and energy recovery ensure peak efficiency and power reuse for optimal performance.

REGENERATE POWER, REDUCE COSTS

- Direct motor-to-axle drive removes unnecessary components, maximizing power efficiency.
- Regenerative energy recovery enables near zero-energy consumption on 6-8% gradients, dramatically cutting energy costs.
- LiuGong's intelligent VCU ensures optimized power distribution, enhancing overall efficiency.

COMFORT TO KEEP YOU MOVING

- Hydro-pneumatic suspension absorbs shocks, reducing fatigue and enhancing ride comfort.
- Air suspension seat, LCD dashboard, and central control screen provide an intuitive and effortless operation.

POWER THAT PAYS OFF

- Double motors in series deliver an impressive peak torque of 13,200N·m for the toughest jobs.
- Direct motor-to-axle drive eliminates transmission losses for instant power response, while the integrated controller regulates torque output for smoother power adjustments.
- A large-diameter lifting cylinder provides strong, high-speed lifting, increasing productivity on every job.

CONFIDENCE IN EVERY CONDITION

- Torque motor feedback braking works with front "dry" and rear "wet" brakes for superior stopping power.
- Hill Start Assist Control prevents unintended movement on inclines, while the high-strength ROPS/FOPS-certified cab enhances safety and reliability.
- 360° vision system eliminates blind spots, giving operators full visibility for safer maneuvering.

SAVING MORE THAN THE ENVIRONMENT

LOWERING YOUR TOTAL COST OF OWNERSHIP

What does adding the DR50CE to your fleet mean for you? For us, it's simple – lower overhead costs and more money in your pocket. We offer industry-first technology designed for maximum efficiency, powered by intelligent systems that set LiuGong apart.

This machine optimizes performance by reducing energy losses and maintenance costs, while its advanced regenerative system enhances sustainability, capturing energy to drive even greater savings.

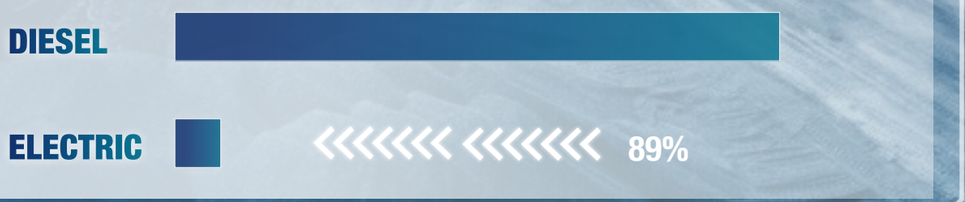
SAVE ON...

- ENERGY
- MAINTENANCE
- PARTS
- OPERATING COSTS

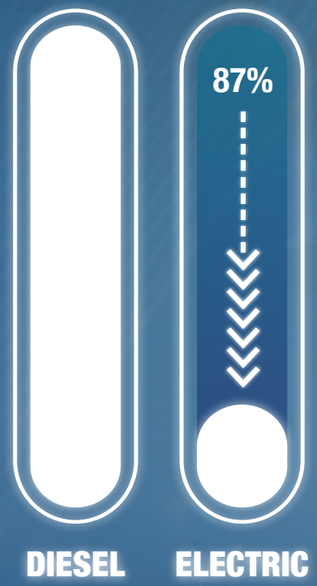
WE'RE PIONEERING AN INTELLIGENT FUTURE

As part of LiuGong's BEV truck lineup, the DR50CE delivers exceptional cost efficiency, significantly lowering energy expenses compared to traditional diesel rigid dump trucks.

ELECTRIC VS. DIESEL COSTS



OPERATING COSTS



This machine isn't just about sustainability; it's a smart financial investment that helps businesses cut operational costs while maximizing efficiency.

- 87% LOWER OPERATING COSTS
- ENERGY SAVINGS ≥ 89%

THE PERFECT BALANCE BETWEEN CONSUMPTION AND REGENERATION

OPTIMIZED COST EFFICIENCY

INTELLIGENT POWER USE

MAXIMIZED UPTIME

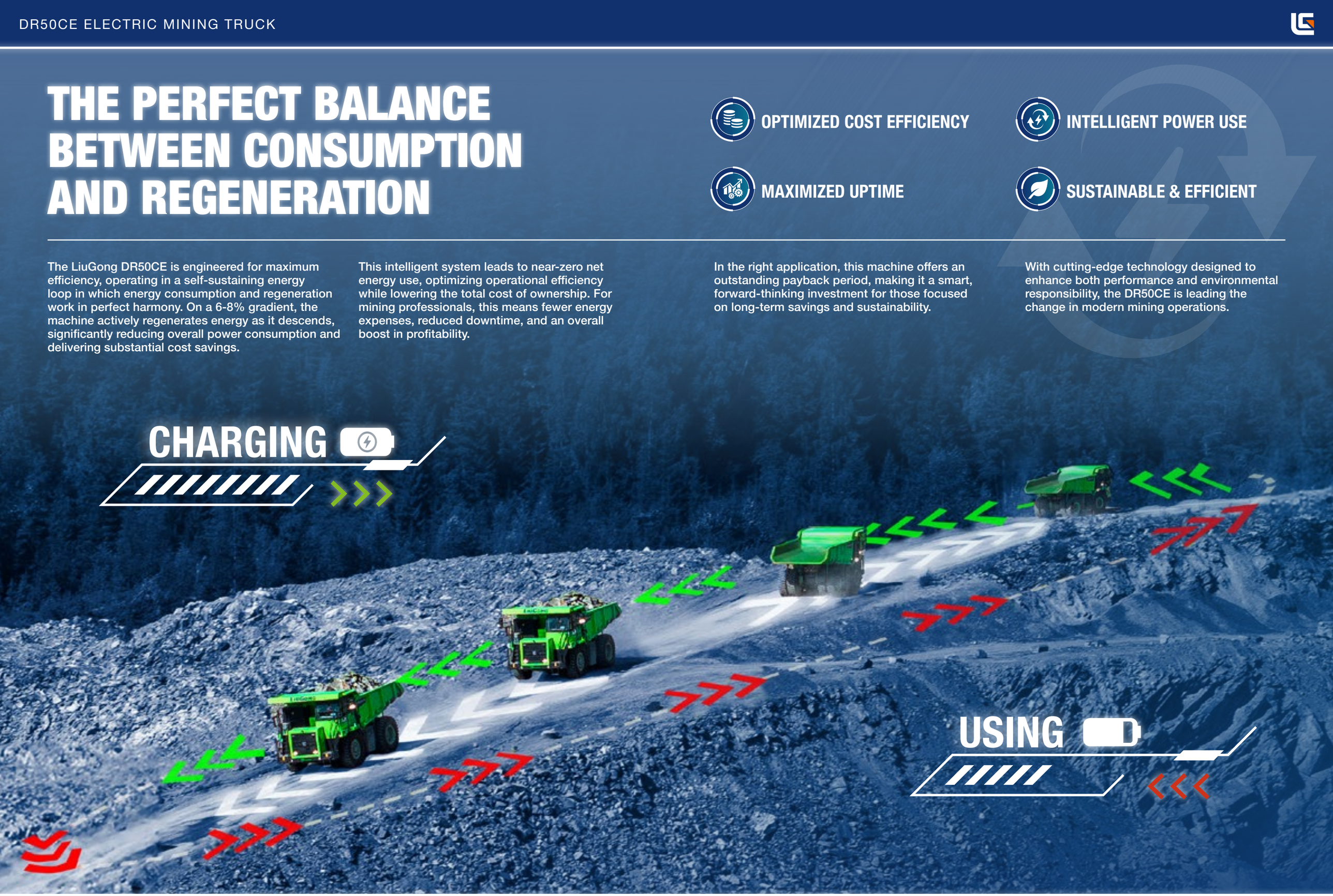
SUSTAINABLE & EFFICIENT

The LiuGong DR50CE is engineered for maximum efficiency, operating in a self-sustaining energy loop in which energy consumption and regeneration work in perfect harmony. On a 6-8% gradient, the machine actively regenerates energy as it descends, significantly reducing overall power consumption and delivering substantial cost savings.

This intelligent system leads to near-zero net energy use, optimizing operational efficiency while lowering the total cost of ownership. For mining professionals, this means fewer energy expenses, reduced downtime, and an overall boost in profitability.

In the right application, this machine offers an outstanding payback period, making it a smart, forward-thinking investment for those focused on long-term savings and sustainability.

With cutting-edge technology designed to enhance both performance and environmental responsibility, the DR50CE is leading the change in modern mining operations.



TOUGH WORLD

OUR MACHINES ARE BUILT TO LAST

The DR50CE isn't just energy efficient, it's built to last. Designed for maximum uptime and profitability, it delivers long-term durability while lowering maintenance costs.

Its integrated cast-welded frame, developed through computer-aided design and simulation analysis, reduces peak static stress by 20% and extends fatigue life by 50%, meaning less downtime and fewer repairs.

Tailor-made for heavy-duty mining, the fully wear-resistant truck bed offers a struck/heaped capacity of 27/35m³, maximizing payload while minimizing wear.

LESS ENERGY…
LESS WEAR…
MORE SAVINGS.

INTELLIGENT SOLUTIONS

CHARGING SOLUTIONS THAT KEEP YOU MOVING

Efficiency isn't just about energy – it's about keeping you working longer and waiting less. The DR50CE's fast, high-powered charging ensures maximum uptime and productivity.

With its 423kWh battery, operators can utilize 85% of its capacity (around 360kWh), ensuring long-lasting performance. When charging is needed, the next-generation 500A single- or dual-gun charger rapidly replenishes energy, fully charging the machine in just 1 hour and 10 minutes.

Even in the most demanding, high-energy applications, the DR50CE recharges quickly, minimizing downtime and keeping your operations running smoothly.

500A
Liquid-Cooled Charging

328kW
Max Charging Power

<1.5-Hour
Rapid Full Charge

25%
Faster Charging

SPECIFICATIONS

WEIGHTS

Description

Gross machine weight includes lubricants, coolant, 100% fuel, all auxilary attachments and rated load.

Chassis Weight (kg)	30,000
Body Weight (kg)	8,500
Operation Machine Weight (kg)	38,500
Rated Load (kg)	50,000
Gross Machine Weight (kg)	88,500

SERVICE CAPACITY

Cooling System (L)	63
Hydraulic System (L)	250
Wheel gear Reduction (Total) (L)	30
Differential (L)	35
Front Suspension (each) (L)	15
Rear Suspension (each) (L)	17

TIRES

Rim Size	15.00/3.0-35
Tire Size	21.00-35/36PR(E4)

SUSPENSION SYSTEM

Description

Front suspension: Independent.
Suspension cylinders: four independent, self-constrained, nitrogen gas / oil suspension cylinders allow a great variation between the empty load and the maximum permissible load absorbing loading and road shocks.
Rear suspension: consisting with oil gas (nitrogen) suspension cylinders, A-frame, lateral stable bar and rear axle.

Front Suspension Stroke (mm)	305
Rear Suspension Stroke (mm)	207
Max. Swing Angle (°)	±6.5

RETARDING

Description

Electrical retarding function for assisting speed control of the entire machine during heavy load downhill operation.

Gear	Max. Travel speed
F1 (km/h)	25
F2 (km/h)	20
F3 (km/h)	15
F4 (km/h)	10

REAR AXLE

Description

Heavy duty rear axle, with full floating shaft, stage one spiral bevel gear main reducer and planetary gear wheel reducer. High-strength casting welds structure.

Final Drive Reduction Ratio	3.414
Wheel Gear Reduction Ratio	5.8
Total Reduction Ratio	19.8

BODY

Description

Body type: Flat floor. Using high strength wear resistant steel plate.
Features with large capacity, high strength, wear and impact resistance, etc.

Bottom Plate Thickness (mm)	16
Front & Side Plate Thickness (mm)	10/10
Struck Capacity (SAE) (m^3)	27
Heaped Capacity (2:1)(SAE) (m^3)	35

DRIVE MOTOR

Motor Model	TZ530XS-HL001
Type	Permanent magnet synchronous motor
Rated Power (kW)	500 @1,050 rpm
Max Torque (N·m)	13,200 @600 rpm
Cooling Mode	Water Cooling
Maximum Traction (kN)	304

LIFTING SYSTEM

Description

Four position six way spool valve controls the functions of lifting, holding, floating and lowering. Two two-stage double-acting lifting cylinders are located at both sides of the frame, ensuring stable lifting performance.

Lifting Time (second)	12
Lowering Time (second)	9

STEERING SYSTEM

Description

Dual-trapezoid steering mechanism is driven by two steering cylinders.
Readiness of an emergency steering pump system is provided allowing at least two emergency steering cycles from left to right.
Steering performance conforms to ISO 5010, SAE J1473 standard.

Max. Steering Angle (°)	38

BREAK SYSTEM

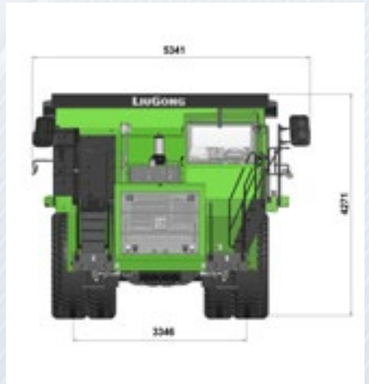
Description

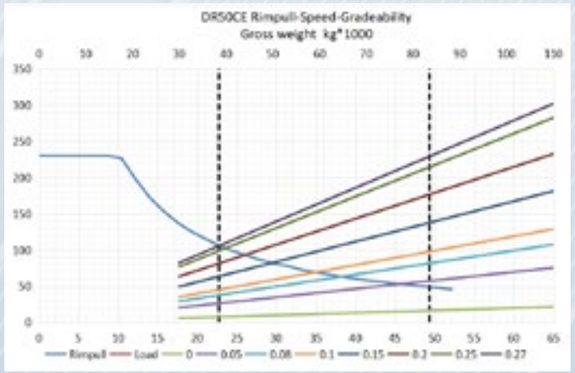
Travel Brake: Front brake adopts disc brake system, while the rear brake utilizes oil-cooled braking system. The dual-circuit braking system enhances safety and reliability.
An auxiliary valve has been added to the braking circuit to ensure quick response and safe operation of the vehicle.
Parking Brake Actuation: Mechanical engagement, hydraulic release.
Braking performance complies with ISO 3450 and SAE J1473 standards.

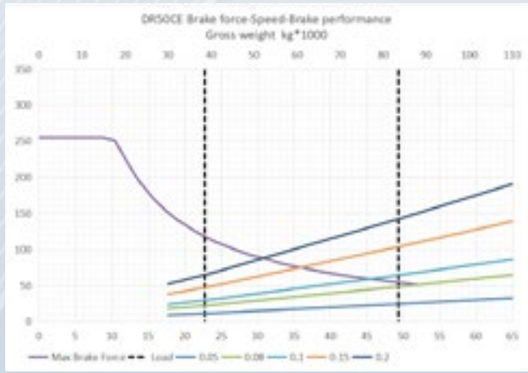
Braking Functions	Travel Brake / Parking Brake / Emergency Brake / Electric Brake
System Working Pressure (MPa)	20.3
Parking Ramp (cm^2)	15%

WEIGHT DISTRIBUTION

Payload	Front axle	Rear axle
Empty Load (%)	52	48
Full Load (%)	34	66







STANDARD & OPTIONAL

HYDRAULIC BRAKING SYSTEM	STANDARD	OPTIONAL
Visual oil level gauge of hydraulic oil tank	■	□
Hydraulic oil tanks (steering and braking, lifting and braking heat dissipation)	■	□
Refueling Filter	■	□
Steering high pressure filter clogged alarm switch	■	□
Oil Tank Drain Unit	■	□
oil tank hoisting device	■	□
quantitative non-confluence system	■	□
Lifting pump	■	□
Four-position lift valve	■	□
Eletric pilot valve	■	□
Balance valve	■	□
Two-stage lifting cylinder	■	□
Lifting limit valve	■	□
Steering gear pump	■	□

Brake gear pump	■	□
Coaxial flow amplification steering gear	■	□
Steering gear with LS function (load sensitive)	■	□
Emergency steering pump	■	□
Double-acting steering cylinder	■	□
Double-acting lifting cylinder	■	□
Service brake accumulator	■	□
Parking brake accumulator	■	□
Electronic dual circuit foot brake valve	■	□
Braking (parking, driving, emergency)	■	□
Brake lamp pressure switch	■	□
Brake system low pressure alarm switch	■	□
Brake high-pressure oil filter	■	□
Rear axle wet brake	■	□
Front axle disc brake	■	□

STANDARD & OPTIONAL

CHASSIS SYSTEM	STANDARD	OPTIONAL
Box girder structure casting welding frame	■	□
Four-column platform support frame	■	□
Front towing hook	■	□
Rear drag pin	■	□
Dump body limit wear plate	■	□
Safety support	■	□
Electronic weighing system	□	■

DUMP BODY SYSTEM	STANDARD	OPTIONAL
Flat-bottom wear-resistant Dump body	■	□
Wear-resistant and anti-stick liner	□	■
Rubber cushion and adjusting shim	■	□
Lifting limit switch	■	□
Dump body proximity switch	■	□
Dump body Rotating Pin Installation Assembly	■	□
Stonehanger	■	□
Dump body safety pin	■	□
Lifting lugs	■	□

COVERING SYSTEM	STANDARD	OPTIONAL
Platform	■	□
Escalator	■	□
Guardrail assembly	■	□
Hood assembly	■	□
Cooling coolant filler	■	□
Hydraulic oil tank filler	■	□
Hydraulic oil tank breather	■	□
Maintenance Bin	■	□
Mudguard	■	□
Platform fire extinguisher	□	■
Pedal Assembly	■	□
Mirror Assembly	■	□

POWER TRANSMISSION SYSTEM	STANDARD	OPTIONAL
Traction motor (motor direct drive)	■	□
motor damping	■	□
drive shaft	■	□
double trapezoidal steering mechanism	■	□
Adjustable steering rod	■	□
Independent front axle	■	□
Front axle king pin mounting assembly	■	□
Rear drive axle with A- frame and tie rods	■	□
Tubeless bias tire	■	□
Tubeless radial tire	□	■
Tire pressure monitoring system	□	■
Rim	■	□
Fixing and protection of valve stem	■	□
Rim pressing plate and bolt and nut	■	□

CAB	STANDARD	OPTIONAL
Fully enclosed FOPS/ROPS cab	■	□
5mm tempered glass	■	□
Ashtray/Cigarette lighter	■	□
Coat hook	■	□
adjustable direction string	■	□
Three steering wheels	■	□
Driver's safety belt	■	□
Front sunshade	■	□
Cup holder	■	□
Driver's seat: air suspension seat	■	□
Coach Seat	■	□
2kg fire extinguisher	■	□
Recorder	□	■
safety hammer	■	□
Door sliding window	■	□
Door lock	■	□
Door push-pull armrest	■	□
Rest Foot	■	□

DUMP BODY ASSEMBLY	STANDARD	OPTIONAL
Removable battery mounting bracket	■	□
Rubber cushion	■	□
Battery box	■	□
Appearance sealing plate	■	□

MAIN COOLING SYSTEM	STANDARD	OPTIONAL
Radiator protection net	■	□
water radiator	■	□
Lifting device of radiator	■	□
Auxiline water tank (automatic rehydration and monitoring)	■	□
Ease of discharge of coolant	■	□
Water tank damping (vertical and horizontal)	■	□
Electronic fan (temperature control)	■	□
Electronic water pump	■	□
Reverse rotation of cooling fan	■	□
Motor water dispersion circuit (motor required for hydraulic pump)	■	□
Wet brake heat dissipation	■	□
Water temperature monitoring	□	■

CHASSIS SYSTEM	STANDARD	OPTIONAL
Chiller (battery cooling)	■	□
Battery independent heat dissipation circuit	■	□
Auxiline water tank (automatic rehydration and monitoring)	■	□
Ease of discharge of coolant	■	□
Water temperature monitoring	□	■

AUTOMATIC LUBRICATION SYSTEM	STANDARD	OPTIONAL
automatic centralized lubrication	■	□

BRAKING SYSTEM	STANDARD	OPTIONAL
Full hydraulic front dry rear wet disc brake	■	□
Parking brake	■	□
Accumulator	■	□
Electronically controlled dual-circuit foot brake pedal	■	□
Brake light switch	■	□
Creep solenoid valve	■	□
Parking brake alarm pressure switch	■	□
Filling valve	■	□

AIR CONDITIONING SYSTEM	STANDARD	OPTIONAL
Heating	■	□
Refrigeration	■	□
Defrosting	■	□

ELECTRICAL SYSTEM	STANDARD	OPTIONAL
Reversing alarm	■	□
Reversing indication	■	□
Brake indication	■	□
Position indication	■	□
Steering/Danger Signal Indication	■	□
Whistle alarm	■	□
Front lighting	■	□
Side lighting	■	□
Reversing lighting	■	□
Front fog lighting	■	□
Distant lighting	■	□
Proximity Lighting	■	□
Stair Lighting	□	■
Service platform lighting	□	■
Lighting in cab	■	□
Emergency braking function	■	□
Front glass scraping function	■	□
Cigarette lighting function	■	□
12V power supply	□	■
Radio function	□	■
Fault alarm and status display	■	□
Digital Power Distribution-High Power Controller	■	□
Electricity 423kWh	■	□
Double gun charging 500A	■	□
Single gun charging 500A	□	■
Timing battery heating	■	□
VCU program remote flash	■	□
Driving recorder	□	■
360°view camera	■	□
Dump body lifting limit	■	□
Dump body drop in place indication	■	□
Proportional control of cooling fan and water pump	■	□
Cooling fan reverse control	■	□
Traction control	■	□
Braking energy recovery	■	□
electric retarder control	■	□
Limp speed limit	■	□
Lock Control	■	□

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