LOVOL

Member of SDHi Group

LOVOL HEAVY INDUSTRY

New Energy Product Series







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COMPANY INTRODUCTION

Lovol Heavy Industry is one of the representative enterprises within the Construction Machinery segment of Shandong Heavy Industry Group, operating under its own independent brand. Its primary product range includes excavators from 1.8 to 200 tons, wheel loaders from 2 to 12 tons, mining trucks from 70 to 160 tons, as well as backhoe loaders primarily targeted at overseas markets.

Since entering the construction machinery industry in 2004, Lovol Heavy Industry has established a global R&D system centered in Qingdao and integrated with operations in Japan and Germany. This structure features a clear division of labor and synergistic collaboration across the three locations, forming a complete technology chain that covers R&D design and testing verification. Concurrently, Lovol has developed an intelligent manufacturing system characterized by "Two Locations, Three Factories", achieving comprehensive digital control over the entire process from core part processing and structural parts production to whole machine assembly and debugging. Lovol Heavy Industry has gradually developed into a global leader in smart construction solutions by providing customers worldwide with intelligent products, equipment interconnection, smart construction, new energy products, and scenario solutions.



LOVOL HEAVY INDUSTRY GROUP CO., LTD.

In the future, Lovol Heavy Industry will continue to focus on its four core strategic businesses: excavators, wheel loaders, mining trucks, and backhoe loaders. It will persist in advancing "four transformations", including promoting market globalization, digitalizing management, lowering the carbon footprint of technologies, and adopting a differentiated business structure to achieve significant business growth, while continuously providing global customers with intelligent and efficient product and service solutions.

CORE BUSINESSES


Excavator


Wheel loader


Mining Truck


Backhoe loader

2004 Year
Enter the industry

2600+
Global employees

TOP50
Top 50 Global Construction Machinery Manufacturers

STRATEGIC POSITIONING

CONSTRUCTION MACHINERY BUSINESS IS ONE OF THE SEVEN CORE BUSINESS SEGMENTS OF SHANDONG HEAVY INDUSTRY GROUP.



Powertrain System



Commercial Vehicle



Agricultural Equipment



Construction machinery



Intelligent Logistics



Marine Mobility



Electric Power Energy

NEW ENERGY PRODUCT CATALOG

EXCAVATOR



FR18F-E
Pure Electric



FR215F-E
Pure Electric



FR215F-EP
Towed Power



FR390F-EP
Towed Power



FR600F-EP
Towed Power



FR1000F-EP
Towed Power



1200kW·h
Battery-powered Vehicle

WHEEL LOADER



FL960-E
Pure Electric



FL960-E Ultra
Pure Electric



FL960-E Ultra
Pure Electric



FL966-E Ultra
Pure Electric



FL966-E Ultra
Pure Electric



FL970-E
Pure Electric



FL970-E Ultra
Pure Electric



FL980-E Ultra
Pure Electric



FL978K-H
Fuel Hybrid

MINING TRUCK



LT90SHEV
Fuel Range Extender



LT105E
Pure Electric



LT130E
Pure Electric



LT130SHEV
Fuel Range Extender



LT145E
Pure Electric

EXCAVATOR

FR18F-E
Pure Electric

FR215F-E
Pure Electric

FR215F-EP
Towed Power

FR390F-EP
Towed Power

FR600F-EP
Towed Power

FR1000F-EP
Towed Power

1200kW·h
Battery-powered Vehicle





FR18F-E

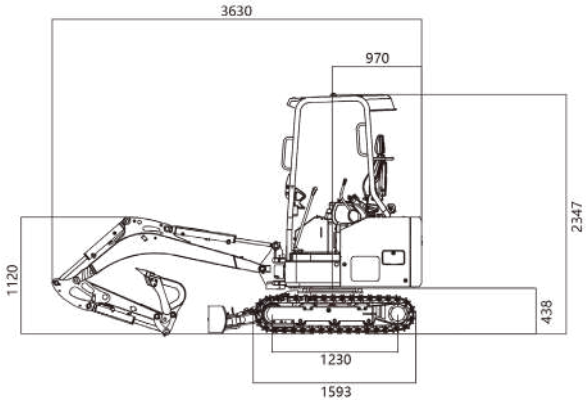
Suitable for typical working conditions

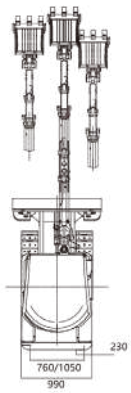
Adaptable to various narrow and precise construction scenarios such as food production sites, underground renovation works and municipal public works.

Economic Benefit Estimation

Calculated based on an average fuel price of $1.43, an average electricity price of $0.143 and 1,500 annual operating hours, it achieves an annual operating cost saving of $2,500 compared with fuel-powered machines, representing a 70% reduction in operating costs.

PRODUCT SPECIFICATIONS





SPECIFICATIONS	
Weight of whole machine (kg)	1950
Rated motor power (kW)	15
Bucket capacity (m^3)	0.05
Energy (kW·h)	30.3
Bucket digging force (kN)	15.2
Maximum excavation height (mm)	3540
Maximum excavation depth (mm)	2310
Maximum excavation radius (mm)	3905
Overall dimensions (L×W×H) (mm)	3630×990×2347
Tail slewing radius (mm)	970
Track gauge (mm)	760/1050

PRODUCT FEATURES

Pure electric & eco-friendly
Pure electric design with zero emissions, zero pollution, and low noise. Equipped with national AC/DC dual charging ports as standard, suitable for multiple application scenarios.

High-efficiency fast charging & energy saving
Motor and electronic control efficiency exceeds 94% with high torque output; intelligent fan speed regulation supports 1-hour fast charging.

Durable, worry-free, and reliable
Internal pipe layout; top-mounted boom cylinder avoids collision damage. The side-shift frame and rear seat of boom front fork adopt cast structure for high rigidity and durability.

Flexible multiple-function adaptation
Short-tail telescopic chassis enables independent boom side-shift, delivers flexible operation in confined spaces, and supports compatibility with various work attachments.



FR215F-E

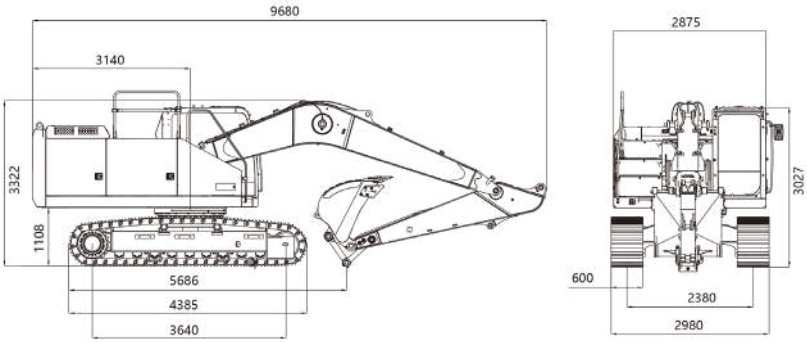
Suitable for typical working conditions

Primarily designed for scenarios including municipal engineering, construction and material handling, it is suitable for all types of earthwork and earth-rock excavation operations.

Economic Benefit Estimation

Calculated based on an average fuel price of $1.43, an average electricity price of $0.143 and 2,000 annual operating hours, it achieves an annual operating cost saving of $26,000 compared with fuel-powered machines, representing a 60% reduction in operating costs.

PRODUCT SPECIFICATIONS



SPECIFICATIONS	
Weight of whole machine (kg)	24500
Rated motor power (kW)	125
Bucket capacity (m³)	1.1
Energy (kW·h)	433
Bucket digging force (kN)	133
Maximum excavation height (mm)	9915
Maximum excavation depth (mm)	6630
Maximum excavation radius (mm)	9845
Overall dimensions (L×W×H) (mm)	9680×2980×3322
Tail slewing radius (mm)	3140
Track gauge (mm)	2380

PRODUCT FEATURES

Pure electric, low noise & eco-friendly

Pure electric design with zero emissions, zero pollution, and low noise. Equipped with national AC/DC dual ports as standard, suitable for various charging scenarios.

Blade battery fast charging

Equipped with the Weichai Blade Battery, featuring high energy density. The maximum charging current of dual charging guns reaches 400A to realize full charging within 1.5 hours, and temperature control starts immediately after power-up.

Intelligent electronic control

Lovol's full-electronic control system realizes intelligent interaction and working condition identification, while high-strength structural and hydraulic components guarantee stable and reliable operation.

Safe and comfortable cab

The new F-generation cab complies with ROPS regulations and features ergonomic comfort, with one-stop service covering its core components.



FR215F-EP

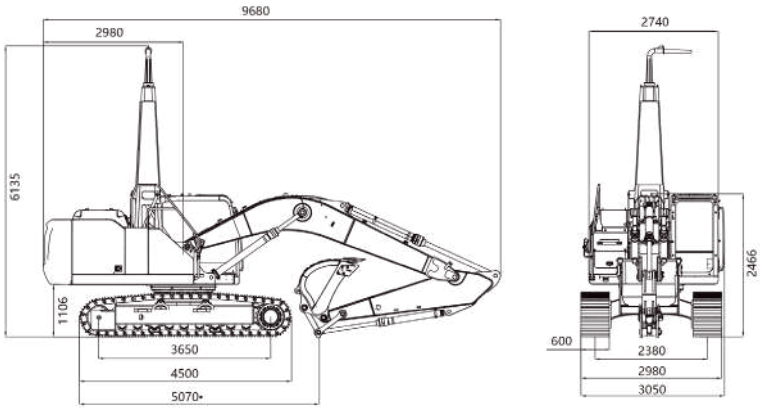
Suitable for typical working conditions

Suitable for fixed small-scale working conditions that do not require large-scale site relocation, such as port stockpiling and material transfer, warehouse material handling, solid waste disposal, and fixed-point earthwork excavation in plant areas.

Economic Benefit Estimation

Calculated based on an average fuel price of $1.43, an average electricity price of $0.143 and 3,000 annual operating hours, it achieves an annual operating cost saving of $39,000 compared with fuel-powered machines, representing a 60% reduction in operating costs.

PRODUCT SPECIFICATIONS



SPECIFICATIONS	
Weight of whole machine (kg)	22000
Rated motor power (kW)	125
Bucket capacity (m^3)	1.0
Power supply	380V AC/50Hz
Bucket digging force (kN)	133
Maximum excavation height (mm)	9915
Maximum excavation depth (mm)	6630
Maximum excavation radius (mm)	9845
Overall dimensions (L×W×H) (mm)	9680×3050×6135
Tail slewing radius (mm)	2980
Track gauge (mm)	2380

PRODUCT FEATURES

Eco-friendly industrial electric drive
The industrial electric drive eliminates fuel consumption with zero emissions, zero pollution, and low noise, serving as an eco-friendly clean solution adaptable to multiple application scenarios.

High-efficiency permanent magnet energy saving
Permanent magnet synchronous motors feature adjustable rotational speed with an energy conversion efficiency of 95%, delivering 50% higher energy savings compared to fuel engines while maintaining equivalent operating efficiency.

Robust chassis for peace of mind
External power supply eliminates range anxiety, equipped with leakage and overvoltage protection; extended chassis adopted with 9 track rollers on each side.

Flexible attachment customization
Bucket is equipped as standard; log grapple, steel clamp, and suction cup are optional. The top-entry current collector supports 360° rotation with customizable cables as required.



FR390F-EP

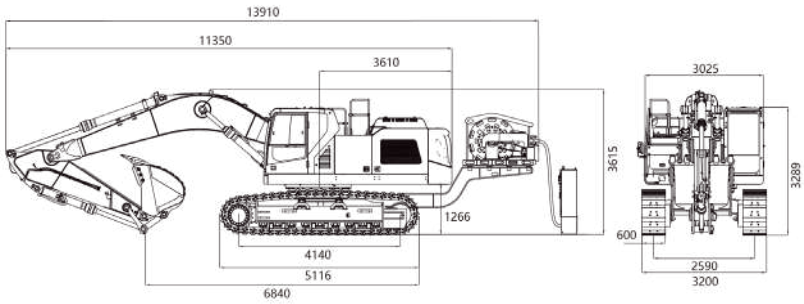
Suitable for typical working conditions

Suitable for fixed small-scale working conditions that do not require large-scale site relocation, including port stockpiling and material transfer, warehouse material handling, solid waste disposal, and fixed-point earth-rock excavation in mining areas.

Economic Benefit Estimation

Calculated based on an average fuel price of $1.43, an average electricity price of $0.143 and 3,000 annual operating hours, it achieves an annual operating cost saving of $79,000 compared with fuel-powered machines, representing a 59% reduction in operating costs.

PRODUCT SPECIFICATIONS



SPECIFICATIONS	
Weight of whole machine (kg)	42000 (including drum)
Rated motor power (kW)	200
Bucket capacity (m^3)	2.2
Power supply	380V AC/50Hz
Bucket digging force (kN)	245
Maximum excavation height (mm)	10055
Maximum excavation depth (mm)	6940
Maximum excavation radius (mm)	10790
Overall dimensions (L×W×H) (mm)	13910×3200×3615
Tail slewing radius (mm)	3610
Track gauge (mm)	2590

PRODUCT FEATURES

Clean industrial electric drive
The industrial electric drive eliminates fuel consumption with zero emissions, zero pollution, and low noise, suitable for scenarios with stringent environmental protection requirements.

High-efficiency permanent magnet power saving
The permanent magnet motor delivers precise speed control with an energy conversion efficiency of 97%. The intelligent fan adjusts its speed in real time to provide cooling on demand, achieving remarkable energy savings.

Low-maintenance external power design
External power supply delivers unlimited endurance. Free of all filter elements to cut maintenance costs. Equipped with bottom-entry cable reel for flexible cable retraction and extension.

Excellent working condition adaptability
Bucket is equipped as standard; lifting cab, multi-function attachments, and extended arm are optional to adapt to diverse construction conditions.



FR600F-EP

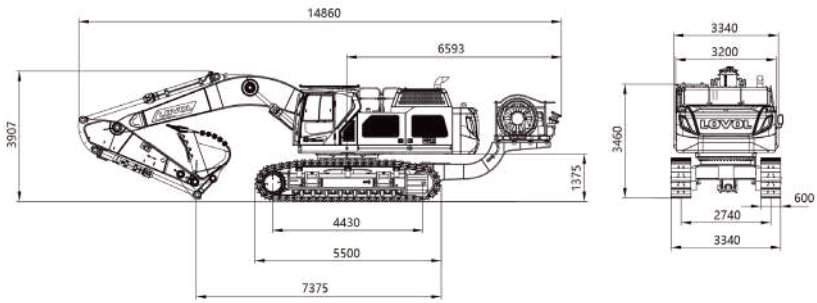
Suitable for typical working conditions

Suitable for fixed-point working conditions of various medium and large-scale mining and ore crushing with access to power supply grids.

Economic Benefit Estimation

Calculated based on an average fuel price of $1.43, an average electricity price of $0.143 and 4,000 annual operating hours, it achieves an annual operating cost saving of $129,000 compared with fuel-powered machines, representing a 58% reduction in operating costs.

PRODUCT SPECIFICATIONS



SPECIFICATIONS	
Weight of whole machine (kg)	55000 (including drum)
Rated motor power (kW)	320
Bucket capacity (m^3)	3.2
Power supply	600V DC
Bucket digging force (kN)	320
Maximum excavation height (mm)	10812
Maximum excavation depth (mm)	7172
Maximum excavation radius (mm)	11544
Overall dimensions (L×W×H) (mm)	14860×3340×3907
Distance from swing center to rear end (mm)	6593
Track gauge (mm)	2740

PRODUCT FEATURES

Green & zero emissions
Powered by battery packs, the vehicle requires no fuel, featuring zero emissions, zero pollution and low noise, and suitable for a wide range of working scenarios.

High-efficiency permanent magnet energy saving
The permanent magnet motor achieves precise speed control and boasts an energy conversion efficiency of 97%. The intelligent fan performs real-time speed regulation to balance heat dissipation and energy consumption control.

Low maintenance for greater peace of mind
Air filter, fuel filter, and oil filter are eliminated to cut maintenance costs, and the bottom-entry cable reel enables flexible winding and unwinding of cables.

Safe & comfortable cab
The F-generation cab complies with ROPS regulations with ergonomic design, built-in leakage and overvoltage protection, and provides one-stop service for core components.



FR1000F-EP

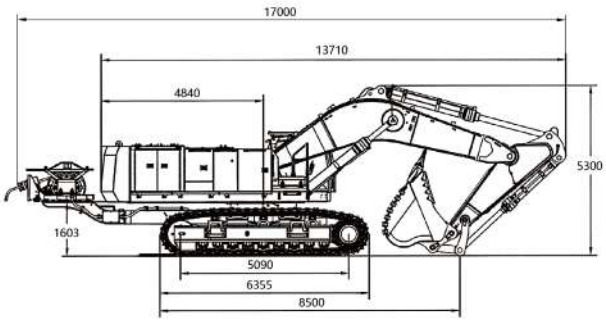
Suitable for typical working conditions

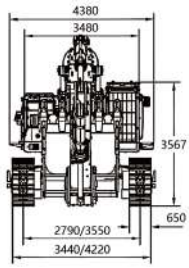
Suitable for working conditions of various large-scale metal mining and open-pit coal mining with access to power supply grids.

Economic Benefit Estimation

Calculated based on an average fuel price of $1.43, an average electricity price of $0.143 and 5,000 annual operating hours, it achieves an annual operating cost saving of $334,000 compared with fuel-powered machines, representing a 65% reduction in operating costs.

PRODUCT SPECIFICATIONS





SPECIFICATIONS	
Weight of whole machine (kg)	105000 (including drum)
Rated motor power (kW)	350
Bucket capacity (m³)	7.0
Power supply	850V DC
Bucket digging force (kN)	501
Maximum excavation height (mm)	12890
Maximum excavation depth (mm)	7180
Maximum excavation radius (mm)	12760
Overall dimensions (L×W×H) (mm)	17000×4380×5300
Tail slewing radius (mm)	4840
Track gauge (mm)	2790/3550

PRODUCT FEATURES

Low-noise eco-friendly power system
As a power source for battery-powered vehicles, it requires no fuel with zero emissions, zero pollution, and low noise, ideal for mine and tunnel working conditions.

High-efficiency permanent magnet energy saving
The permanent magnet motor enables precise speed control with an energy conversion efficiency of 97%. The intelligent fan adjusts speed in real time for on-demand heat dissipation, delivering outstanding energy efficiency.

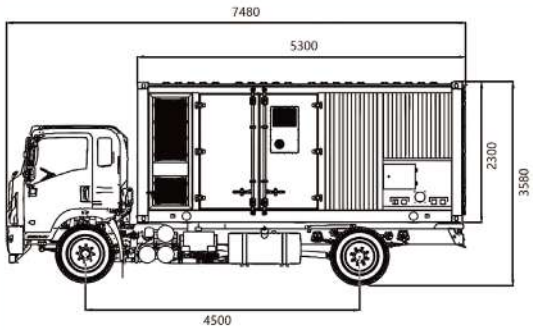
Independent heat dissipation for reliable operation
Independent cooling system for hydraulic oil, water and electrical circuits; filter-free design cuts maintenance costs. The cable reel enables smooth retraction and deployment of trailing cables.

Multiple safety protections
The reel supports manual, remote control, and fully automatic winding/unwinding modes, equipped with automatic alarm, leakage protection, and overvoltage protection to prevent electrical failures via multi-layer safeguards.



Battery-powered Vehicle

PRODUCT SPECIFICATIONS





SPECIFICATIONS	
Energy storage unit mass (kg)	14500
Rated capacity (kW·h)	1254
Output power (kW)	DC400
Discharge rate	0.5P
Battery type	Energy storage battery
Cell type	Lithium iron phosphate
Pack configuration	1P52S*4*6
Output voltage (V)	665.6V DC
Number of charging ports (pcs)	4
Compatible charging pile	240/320kW dual-gun charging pile
Transport overall dimensions (L×W×H) (mm)	7480×2550×3580

PRODUCT FEATURES

Safe & long-service-life lithium battery
Matched with high-capacity battery and self-developed high-voltage box, the battery cells operate stably with cycle life ≥7000 times and high safety performance.

High compatibility for fast charging
Supports 4-gun compatible charging with a maximum current of 800A. The unit can be fully charged in as little as 1.6 hours for rapid power replenishment.

Intelligent temperature control protection
BMS monitors operating parameters in real time with multiple-level safety protection. Liquid cooling and heating temperature regulation guarantees stable operation within the range of -30℃ to +55℃.

Flexible mobile energy storage
Customized container matches three battery specifications of 800/1200/1600kWh, capable of supplying power for 60–150T excavators. Mounted on vehicle chassis for easy installation and disassembly , it delivers unrestricted mobile energy supply.

WHEEL LOADER

FL960-E
Pure Electric

FL960-E Ultra
Pure Electric

FL960-E Ultra
CTB Pure Electric

FL966-E Ultra
Pure Electric

FL966-E Ultra
CTB Pure Electric

FL970-E
Pure Electricv

FL970-E Ultra
Pure Electric

FL980-E Ultra
Pure Electric

FL978K-H
Fuel Hybrid





FL960-E

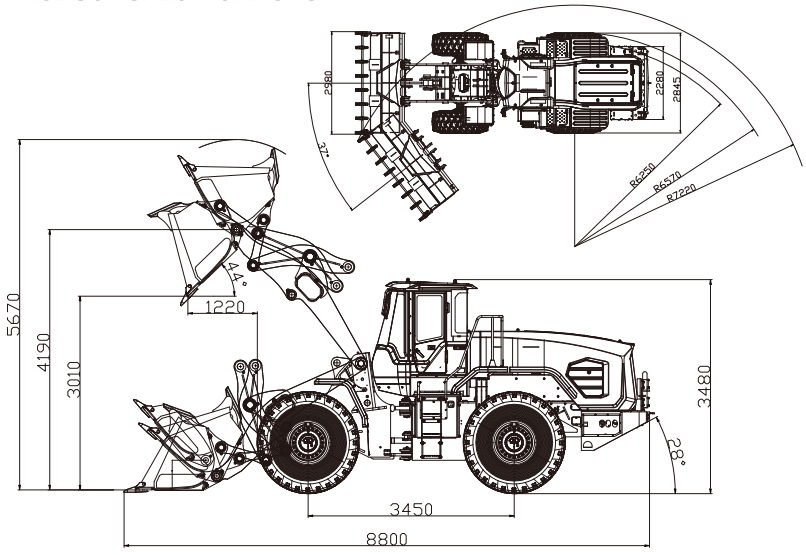
Suitable for typical working conditions

Suitable for sites with small scale, low operating volume and low material density, such as small and medium-sized steel mills, power plants, coal washing plants, coking plants, sand and gravel yards and mixing stations, for bulk material loading, transfer, feeding and stacking operations.

Economic Benefit Estimation

Calculated based on an average fuel price of $1.43, an average electricity price of $0.143 and 3,000 annual operating hours, it achieves an annual operating cost saving of $47,000 compared with fuel-powered machines, representing a 73% reduction in operating costs.

PRODUCT SPECIFICATIONS



SPECIFICATIONS	
Curb weight (kg)	19000
Rated motor power (kW)	345
Rated payload (kg)	5800
Bucket capacity (m³)	3.3
Energy (kW·h)	421
Wheel base (mm)	3450
Maximum unloading height (mm)	3010
Unloading distance (mm)	1220
Overall dimensions (L×W×H) (mm)	8800×2980×3480
Maximum breakout force (kN)	170
Total cycling time (s)	10.3

PRODUCT FEATURES

Excellent working condition adaptability

It complies with EU safety production requirements; boom limit and Return-to-Dig functions are fitted as standard equipment.

Reliable and durable

The single-speed gearbox features simple construction with high durability and maintenance-free design. Emergency steering and active braking come as standard for improved safety.

Efficient transmission

The three-motor system consists of dual high-speed travel motors matched with a single-speed gearbox, featuring a wide high-efficiency operating range, quicker response, and higher efficiency.

Convenient maintenance design

Travel damping is fitted as standard to deliver superior ride comfort.



FL960-E Ultra

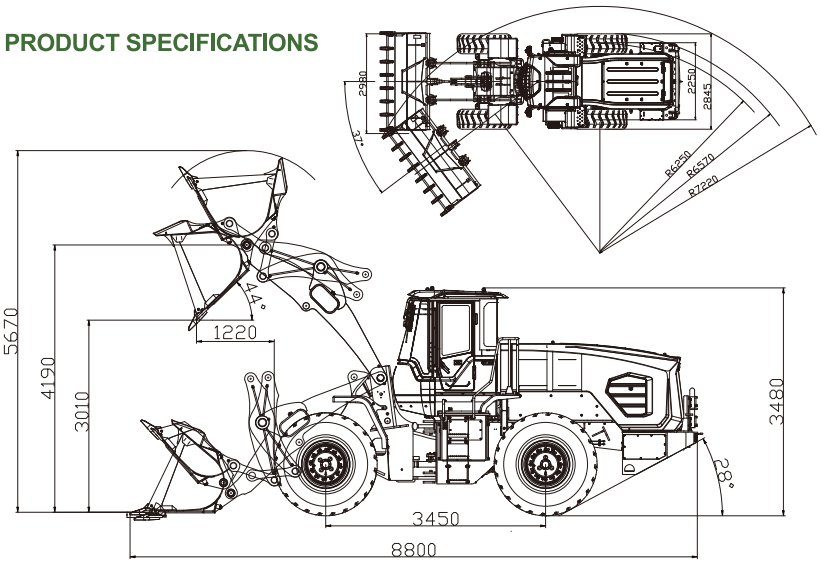
Suitable for typical working conditions

Suitable for sites with small scale, low operating volume and low material density, such as small and medium-sized steel mills, power plants, coal washing plants, coking plants, sand and gravel yards and mixing stations, for bulk material loading, transfer, feeding and stacking operations.

Economic Benefit Estimation

Calculated based on an average fuel price of $1.43, an average electricity price of $0.143 and 3,000 annual operating hours, it achieves an annual operating cost saving of $47,000 compared with fuel-powered machines, representing a 73% reduction in operating costs.

PRODUCT SPECIFICATIONS



SPECIFICATIONS	
Curb weight (kg)	18600
Rated motor power (kW)	225
Rated payload (kg)	5800
Bucket capacity (m³)	3.3
Energy (kW·h)	357
Wheel base (mm)	3450
Maximum unloading height (mm)	3010
Unloading distance (mm)	1220
Overall dimensions (L×W×H) (mm)	8800×2980×3480
Maximum breakout force (kN)	170
Total cycling time (s)	10

PRODUCT FEATURES

Intelligent remote control

Supports remote start, battery preheating, air conditioning and light control, as well as scheduled charging. Multiple calibrated working modes are available to adapt to various operating conditions.

Dual-motor high reliability design

Dual high-speed permanent magnet synchronous motors adopt integrated motor & ECU design, reducing high-voltage wiring harness and effectively suppressing electromagnetic interference in vehicle communication.

AMT efficient transmission

It employs an AMT transmission with integrated motor-gearbox structure and a newly added rapid material dumping function, greatly improving operational efficiency.

Convenient maintenance design

Newly styled engine hood with electric tilting rear opening up to 65°, offering ample maintenance space for easier equipment inspection and servicing.



FL960-E Ultra

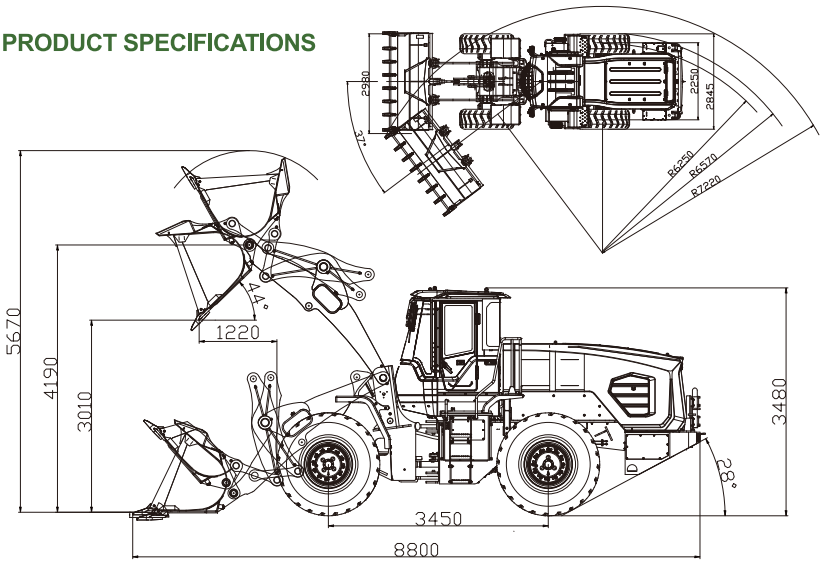
Suitable for typical working conditions

Suitable for sites with small scale, low operating volume and low material density, such as small and medium-sized steel mills, power plants, coal washing plants, coking plants, sand and gravel yards and mixing stations, for bulk material loading, transfer, feeding and stacking operations.

Economic Benefit Estimation

Calculated based on an average fuel price of $1.43, an average electricity price of $0.143 and 3,000 annual operating hours, it achieves an annual operating cost saving of $47,000 compared with fuel-powered machines, representing a 73% reduction in operating costs.

PRODUCT SPECIFICATIONS



SPECIFICATIONS	
Curb weight (kg)	18570/18800
Rated motor power (kW)	225
Rated payload (kg)	5800
Bucket capacity (m³)	3.3
Energy (kW·h)	352/401
Wheel base (mm)	3450
Maximum unloading height (mm)	3010
Unloading distance (mm)	1220
Overall dimensions (L×W×H) (mm)	8800×2980×3480
Maximum breakout force (kN)	170
Total cycling time (s)	10

PRODUCT FEATURES

Integrated design, sturdy & durable

Adopts highly integrated CTB blade batteries featuring compact size and high energy density with greatly improved sealing performance. Its structural strength is increased by 30% and wiring harnesses are significantly reduced, effectively boosting product reliability. Remote control function is supported.

Dual-motor high reliability design

Dual high-speed permanent magnet synchronous motors adopt integrated motor & ECU design, reducing high-voltage wiring harness and effectively suppressing electromagnetic interference in vehicle communication.

AMT efficient transmission

It employs an AMT transmission with integrated motor-gearbox structure and a newly added rapid material dumping function, greatly improving operational efficiency.

Convenient maintenance design

Restyled engine hood with electric rear tilting opening up to 65°, which provides ample maintenance space and simplifies equipment inspection and service.



FL966-E Ultra

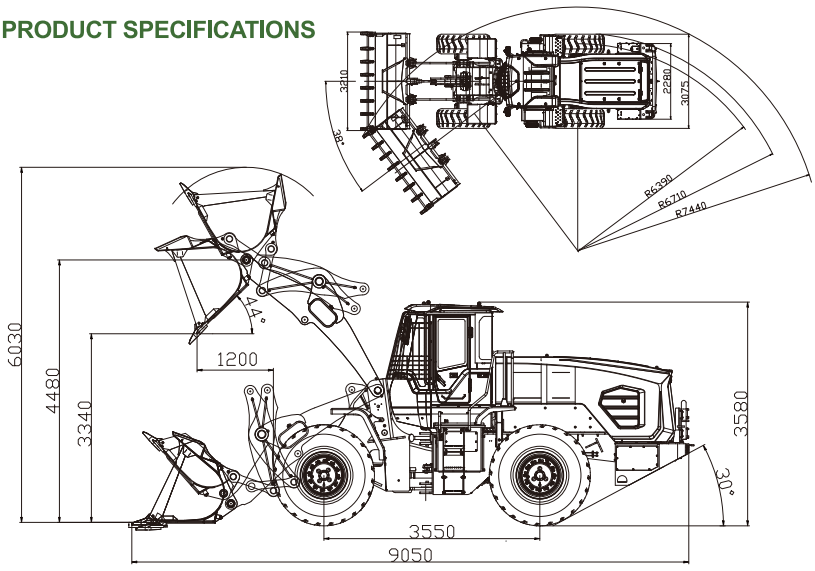
Suitable for typical working conditions

Suitable for large-scale industrial and mining stockyards, for large-scale loading, transfer, feeding and stacking operations of high-density bulk materials.

Economic Benefit Estimation

Calculated based on an average fuel price of $1.43, an average electricity price of $0.143 and 3,000 annual operating hours, it achieves an annual operating cost saving of $54,000 compared with fuel-powered machines, representing a 73% reduction in operating costs.

PRODUCT SPECIFICATIONS



SPECIFICATIONS	
Curb weight (kg)	21160/22100
Rated motor power (kW)	225
Rated payload (kg)	6500
Bucket capacity (m³)	4.0
Energy (kW·h)	357/421
Wheel base (mm)	3550
Maximum unloading height (mm)	3340
Unloading distance (mm)	1200
Overall dimensions (L×W×H) (mm)	9050×3210×3580
Maximum breakout force (kN)	180
Total cycling time (s)	10.6

PRODUCT FEATURES

Intelligent remote control

Supports remote startup, battery preheating, air conditioning and lighting control, and scheduled charging. Multiple calibrated working modes are configured to suit diverse operating conditions.

Dual-motor high reliability design

Dual high-speed permanent magnet synchronous motors adopt integrated motor & ECU design, reducing high-voltage wiring harness and effectively suppressing electromagnetic interference in vehicle communication.

AMT efficient transmission

It employs an AMT transmission with integrated motor-gearbox structure and a newly added rapid material dumping function, greatly improving operational efficiency.

Convenient maintenance design

New-look engine hood with electric rear tilting opening at 65°, delivering expanded maintenance space for easier equipment inspection and servicing.



FL966-E Ultra

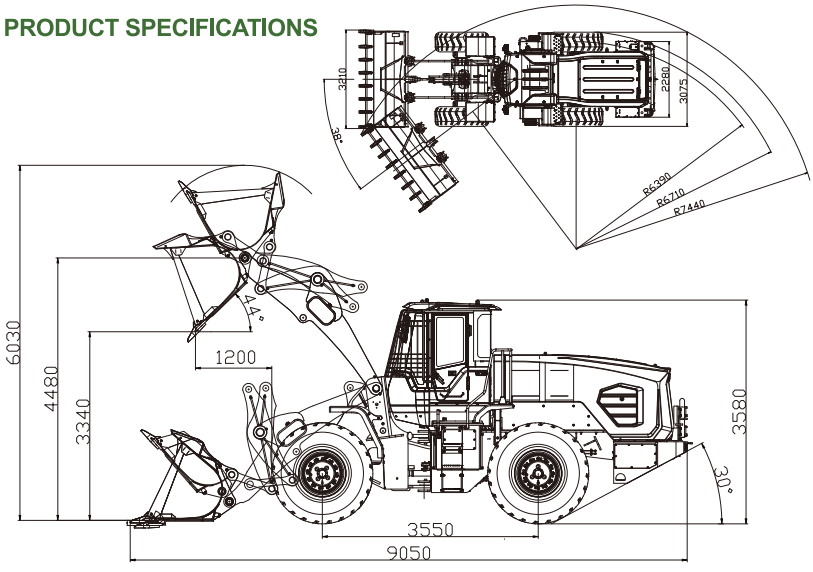
Suitable for typical working conditions

Suitable for large-scale industrial and mining stockyards, for large-scale loading, transfer, feeding and stacking operations of high-density bulk materials.

Economic Benefit Estimation

Calculated based on an average fuel price of $1.43, an average electricity price of $0.143 and 3,000 annual operating hours, it achieves an annual operating cost saving of $54,000 compared with fuel-powered machines, representing a 73% reduction in operating costs.

PRODUCT SPECIFICATIONS



SPECIFICATIONS	
Curb weight (kg)	21570
Rated motor power (kW)	225
Rated payload (kg)	6500
Bucket capacity (m³)	4.0
Energy (kW·h)	352
Wheel base (mm)	3550
Maximum unloading height (mm)	3340
Unloading distance (mm)	1200
Overall dimensions (L×W×H) (mm)	9050×3210×3580
Maximum breakout force (kN)	180
Total cycling time (s)	10.3

PRODUCT FEATURES

Integrated design, sturdy & durable

It supports remote start, battery preheating, air conditioning and lighting control, as well as scheduled charging. Multiple calibrated working modes are available to adapt to various working conditions.

Dual-motor high reliability design

Dual high-speed permanent magnet synchronous motors adopt integrated motor & ECU design, reducing high-voltage wiring harness and effectively suppressing electromagnetic interference in vehicle communication.

AMT efficient transmission

It employs an AMT transmission with integrated motor-gearbox structure and a newly added rapid material dumping function, greatly improving operational efficiency.

Convenient maintenance design

The engine hood features a brand-new appearance and can be electrically tilted backward to open at 65°, offering larger maintenance space and more convenient equipment inspection and maintenance.



FL970-E

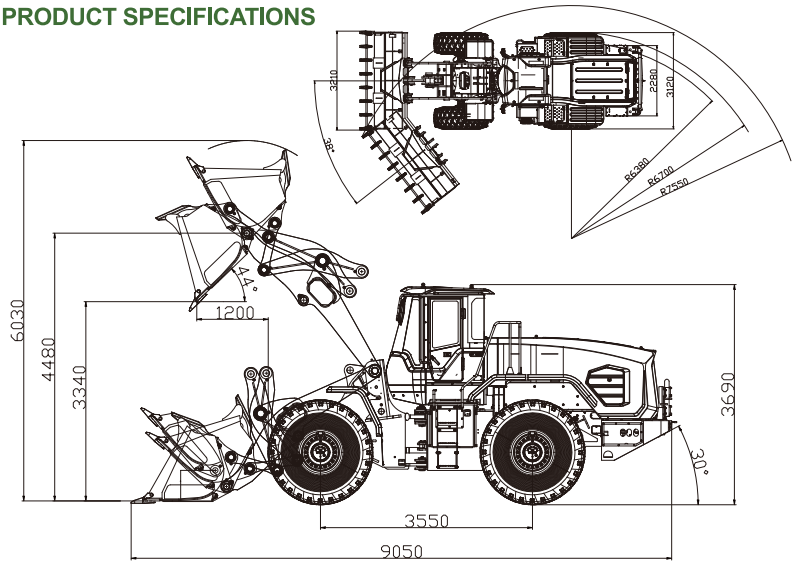
Suitable for typical working conditions

Suitable for large-scale industrial and mining stockyards, for large-scale loading, transfer, feeding and stacking operations of high-density bulk materials.

Economic Benefit Estimation

Calculated based on an average fuel price of $1.43, an average electricity price of $0.143 and 3,000 annual operating hours, it achieves an annual operating cost saving of $56,000 compared with fuel-powered machines, representing a 72% reduction in operating costs.

PRODUCT SPECIFICATIONS



SPECIFICATIONS	
Curb weight (kg)	23000
Rated motor power (kW)	345
Rated payload (kg)	6500
Bucket capacity (m³)	4.0
Energy (kW·h)	421
Wheel base (mm)	3550
Maximum unloading height (mm)	3340
Unloading distance (mm)	1200
Overall dimensions (L×W×H) (mm)	9050×3210×3690
Maximum breakout force (kN)	180
Total cycling time (s)	10.3

PRODUCT FEATURES

Excellent working condition adaptability

It complies with EU safety production requirements; boom limit and Return-to-Dig functions are fitted as standard equipment.

Reliable and durable

The single-speed gearbox features simple construction with high durability and maintenance-free design. Emergency steering and active braking come as standard for improved safety.

Efficient transmission

The three-motor system consists of dual high-speed travel motors matched with a single-speed gearbox, featuring a wide high-efficiency operating range, quicker response, and higher efficiency.

Convenient maintenance design

Travel damping is fitted as standard to deliver superior ride comfort.



FL970-E Ultra

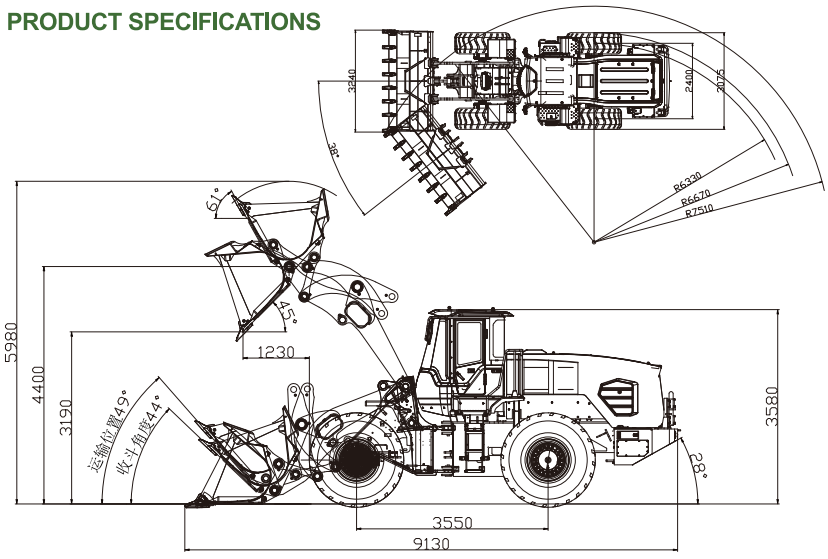
Suitable for typical working conditions

Suitable for large-scale industrial and mining stockyards, for large-scale loading, transfer, feeding and stacking operations of high-density bulk materials.

Economic Benefit Estimation

Calculated based on an average fuel price of $1.43, an average electricity price of $0.143 and 3,000 annual operating hours, it achieves an annual operating cost saving of $56,000 compared with fuel-powered machines, representing a 72% reduction in operating costs.

PRODUCT SPECIFICATIONS



SPECIFICATIONS	
Curb weight (kg)	23700
Rated motor power (kW)	210
Rated payload (kg)	7000
Bucket capacity (m³)	4.2
Energy (kW·h)	421
Wheel base (mm)	3550
Maximum unloading height (mm)	3190
Unloading distance (mm)	1230
Overall dimensions (L×W×H) (mm)	9130×3240×3580
Maximum breakout force (kN)	200
Total cycling time (s)	10.6

PRODUCT FEATURES

Excellent working condition adaptability

The battery and all controllers adopt an integrated packaging structure. Damping pads are installed at joints between the battery bracket and vehicle frame to adapt to diverse complex working conditions.

Long driving range

It adopts high-speed integrated powertrain and integrated thermal management, lifting transmission efficiency by 10% for extended driving range.

Efficient transmission

It adopts electro-hydraulic proportional automatic shifting featuring fast response and smooth shifting, and supports compound movements.

Convenient maintenance design

The engine hood has a new appearance. Equipped with a rear-mounted radiator and split-opening cooling fan accessible from the rear, it facilitates dust removal, making equipment inspection and servicing more convenient.



FL980-E Ultra

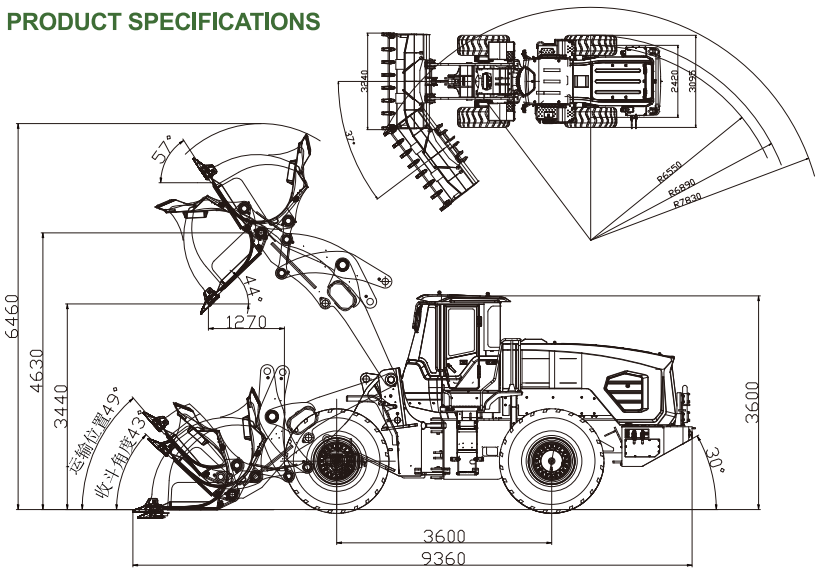
Suitable for typical working conditions

Suitable for materials of various densities, and applicable to medium and large-scale mine waste dumping and transfer as well as port material transfer operations in high-volume working sites.

Economic Benefit Estimation

Calculated based on an average fuel price of $1.43, an average electricity price of $0.143 and 3,000 annual operating hours, it achieves an annual operating cost saving of $65,000 compared with fuel-powered machines, representing a 72% reduction in operating costs.

PRODUCT SPECIFICATIONS



SPECIFICATIONS	
Curb weight (kg)	24940
Rated motor power (kW)	210
Rated payload (kg)	7800
Bucket capacity (m³)	5.2
Energy (kW·h)	421
Wheel base (mm)	3600
Maximum unloading height (mm)	3440
Unloading distance (mm)	1270
Overall dimensions (L×W×H) (mm)	9360×3240×3600
Maximum breakout force (kN)	210
Total cycling time (s)	10.3

PRODUCT FEATURES

Excellent working condition adaptability

The battery and all controllers adopt an integrated packaging structure. Damping pads are installed at joints between the battery bracket and vehicle frame to adapt to diverse complex working conditions.

Long driving range

It adopts high-speed integrated powertrain and integrated thermal management, lifting transmission efficiency by 10% for extended driving range.

Efficient transmission

It adopts electro-hydraulic proportional automatic shifting featuring fast response and smooth shifting, with compound movements supplied as standard.

Convenient maintenance design

The engine hood has a new appearance. Equipped with a rear-mounted radiator and split-opening cooling fan accessible from the rear, it facilitates dust removal, making equipment inspection and servicing more convenient.



FL978K-H

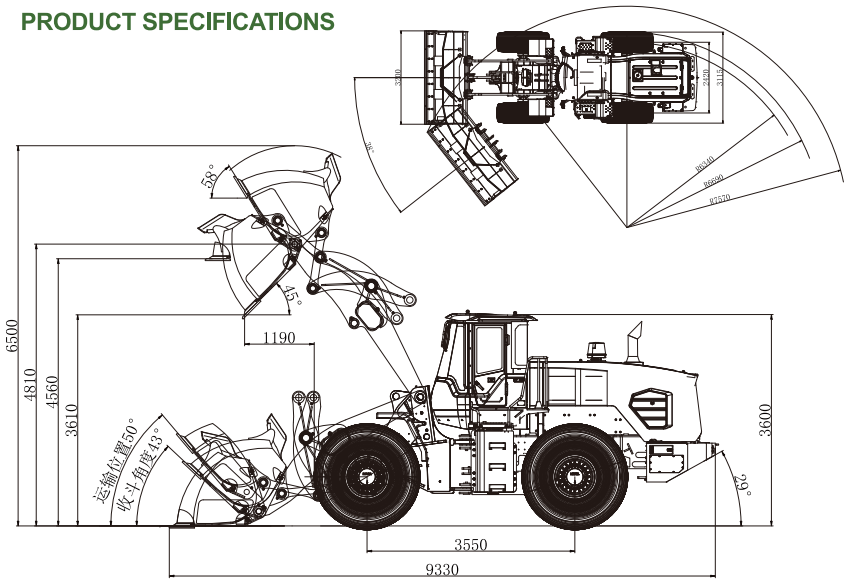
Suitable for typical working conditions

Suitable for scenarios with inconvenient charging access and demand for continuous high-intensity operations, it can handle materials of various densities in large working sites, and is applicable to overburden stripping, waste dumping and transfer in medium-sized mines as well as material transfer and stacking in medium-sized ports.

Economic Benefit Estimation

Calculated based on an average fuel price of $1.43, an average electricity price of $0.143 and 3,000 annual operating hours, it achieves an annual operating cost saving of $25,000 compared with fuel-powered machines, representing a 33% reduction in operating costs.

PRODUCT SPECIFICATIONS



SPECIFICATIONS	
Curb weight (kg)	22580
Rated engine power (kW/rpm)	228/2000
Rated motor power (kW)	210
Rated payload (kg)	7800
Bucket capacity (m³)	4.5
Energy (kW·h)	57.6
Wheel base (mm)	3550
Maximum unloading height (mm)	3610
Unloading distance (mm)	1190
Overall dimensions (L×W×H) (mm)	9330*3200*3600
Maximum breakout force (kN)	190
Total cycling time (s)	10.3

PRODUCT FEATURES

Efficient
Hybrid power system enables continuous non-stop operation. Equipped with high-power motors for more efficient energy transmission.

Energy-saving
The battery realizes "peak shaving and valley filling", enabling the engine and generator to run steadily near the high-efficiency zone, delivering over 30% energy savings compared with conventional fuel vehicles.

Comfortable
Adopts hydraulic pilot control. Permanent magnet synchronous motors are used for both working and travel systems, featuring fast response, low impact, comfortable operation and higher working efficiency.

Safety
Multiple energy recovery modes boost energy utilization efficiency, and multi-stage braking guarantees vehicle safety.

MINING TRUCK

LT90SHEV
Fuel Range Extender

LT105E
Pure Electric

LT130E
Pure Electric

LT130SHEV
Fuel Range Extender

LT145E
Pure Electric





LT90SHEV

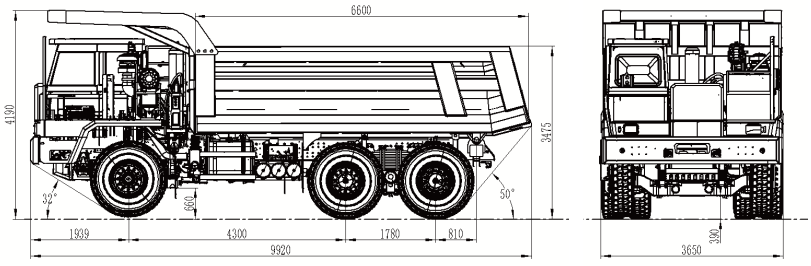
Suitable for typical working conditions

Suitable for overburden stripping and haulage working conditions in various large open-pit coal mines and metal mines.

Economic Benefit Estimation

Calculated based on an average fuel price of $1.43, an average electricity price of $0.143 and an annual operating mileage of 60,000 km, it delivers an annual operating cost saving of $25,000 compared with fuel-powered machines, representing an 17% reduction in operating costs.

PRODUCT SPECIFICATIONS



SPECIFICATIONS	
Gross vehicle weight (kg)	90000
Rated engine power (kW/rpm)	338/2100
Rated motor power (kW)	520
Payload (kg)	60000
Standard cargo box (m^3)	32
Battery capacity (kW·h)	40
Max. speed (km/h)	45
Max. gradeability (%)	30
Min. turning diameter (m)	25
Overall dimensions (L×W×H) (mm)	9920×3650×4190
Max. cargo box tipping angle (°)	46
Rated drive axle load (t)	20+35+35

PRODUCT FEATURES

High combustion efficiency

Weichai WP12 is matched with a mature range extender motor and drive system, delivering high combustion efficiency and excellent fuel economy.

High-rate battery

It adopts lithium titanate battery with ultra-wide operating temperature range of -40°C to 50°C, 10,000 charge-discharge cycles, high-rate charging and discharging, and rapid power response, well suited for high-frequency and heavy-duty working scenarios.

Excellent maneuverability

The AMT 4-speed transmission delivers smooth gear shifting, simple operation, and comfortable driving experience.

Low maintenance cost

Electric braking reduces brake wear. The clutch-free design cuts maintenance costs.



LT105E

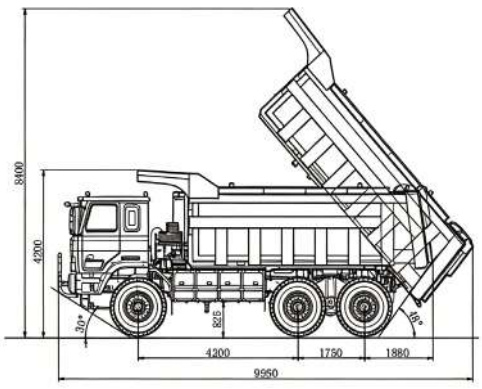
Suitable for typical working conditions

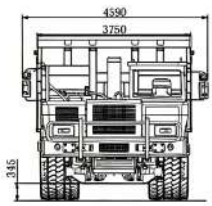
Suitable for overburden stripping operations in sand and gravel aggregate, cement and metal mines, as well as mining and haulage working conditions dominated by heavy-load downhill operations.

Economic Benefit Estimation

Calculated based on an average fuel price of $1.43, an average electricity price of $0.143 and an annual operating mileage of 60,000 km, it delivers an annual operating cost saving of $140,000 compared with fuel-powered machines, representing an 88% reduction in operating costs.

PRODUCT SPECIFICATIONS





SPECIFICATIONS	
Gross vehicle weight (kg)	105000
Rated motor power (kW)	660
Payload (kg)	70000
Standard cargo box (m³)	40
Battery capacity (kW·h)	400/600
Max. speed (km/h)	40
Max. gradeability (%)	30
Min. turning diameter (m)	24
Overall dimensions (L×W×H) (mm)	9950×3750×4200
Max. cargo box tipping angle (°)	48
Rated axle load (t)	25+40+40

PRODUCT FEATURES

Powerful performance

Equipped with high-power 660kW dual motors and a mature three-speed gearbox, it generates abundant power and greatly improves grade climbing capability.

Intelligent energy saving

The mature VCU control program, matched with mainstream industrial controllers and technologies including multi-gear electric energy recovery control and high-efficiency energy management, greatly improves vehicle economy.

Stable & reliable

The frame adopts an upper-and-lower main & auxiliary beam structure. The main longitudinal beam adopts three-layer plate structure to guarantee overall frame stability and reliability with superior bending resistance.

Brake safety performance

Equipped with a hydraulic retarder as standard, it delivers stable braking and efficient heat dissipation, ideal for heavy-duty continuous long downhill operating conditions.



LT130E

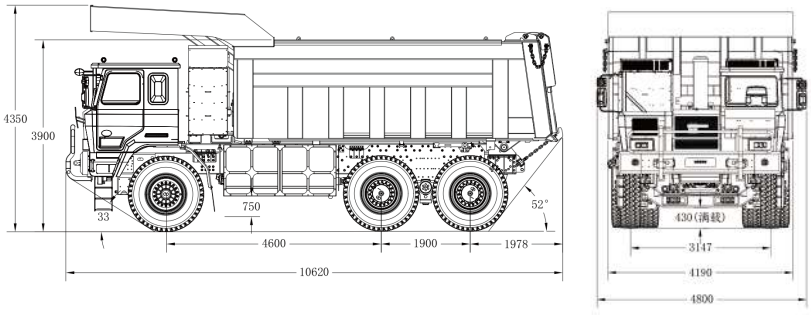
Suitable for typical working conditions

Suitable for overburden stripping in large open-pit coal mines and metal mines, and mainly applied to haulage working conditions featuring heavy-load uphill and level-road transportation.

Economic Benefit Estimation

Calculated based on an average fuel price of $1.43, an average electricity price of $0.143 and an annual operating mileage of 60,000 km, it delivers an annual operating cost saving of $170,000 compared with fuel-powered machines, representing an 68% reduction in operating costs.

PRODUCT SPECIFICATIONS



SPECIFICATIONS	
Gross vehicle weight (kg)	130000
Rated motor power (kW)	660
Payload (kg)	90000
Standard cargo box (m^3)	50
Battery capacity (kW·h)	801
Max. speed (km/h)	45
Max. gradeability (%)	30
Min. turning diameter (m)	26
Overall dimensions (L×W×H) (mm)	10620×4190×4350
Max. cargo box tipping angle (°)	46
Rated drive axle load (t)	30+50+50

PRODUCT FEATURES

Powerful & efficient
Matched with high-power dual motors, three-speed transmission, and high-capacity lithium iron phosphate battery, it delivers robust power and stable range, raising comprehensive transportation efficiency by over 10%.

Intelligent energy saving
The mature VCU control program enables independent control. Multi-gear electric energy recovery and precise shift control help improve vehicle economy.

Safe and reliable
It adopts combined braking system consisting of air brake, electric energy recovery braking, and hydraulic retarder. Emergency steering intervenes automatically to improve overall vehicle safety.

Stable & durable
It is equipped with flexible main and auxiliary frame; the main longitudinal beam adopts three-layer plates with thickness of 12+12+10mm, ensuring integral frame stability, reliability, and extended service life.



LT130SHEV

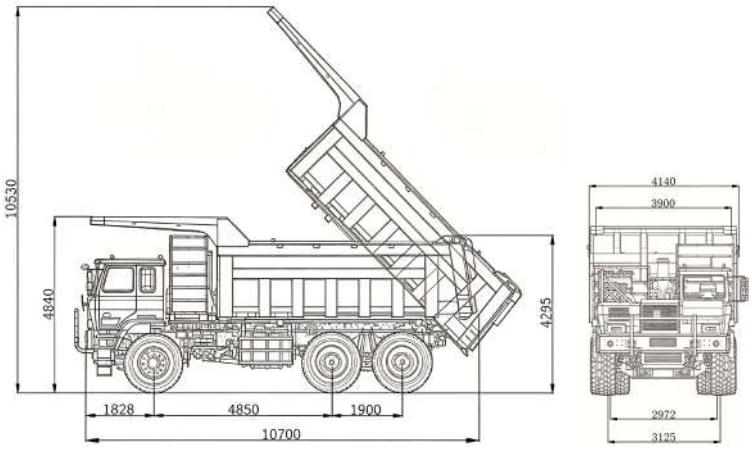
Suitable for typical working conditions

Suitable for overburden stripping and haulage working conditions in various large open-pit coal mines and metal mines.

Economic Benefit Estimation

Calculated based on an average fuel price of $1.43, an average electricity price of $0.143 and an annual operating mileage of 60,000 km, it delivers an annual operating cost saving of $370,000 compared with fuel-powered machines, representing an 15% reduction in operating costs.

PRODUCT SPECIFICATIONS



SPECIFICATIONS	
Gross vehicle weight (kg)	130000
Rated engine power (kW/rpm)	562/1900
Rated motor power (kW)	660
Payload (kg)	90000
Standard cargo box (m³)	50
Battery capacity (kW·h)	173
Max. speed (km/h)	45
Max. gradeability (%)	30
Min. turning diameter (m)	28
Overall dimensions (L×W×H) (mm)	10700×4140×4840
Max. cargo box tipping angle (°)	46
Rated axle load (t)	30+50+50

PRODUCT FEATURES

Energy-saving& efficient

Equipped with the Weichai WP14T engine and mature three-electric system, it adopts intelligent shift range control, energy recovery, and other technologies to cut fuel consumption by around 20% under combined operating conditions.

Low maintenance costs

Electric braking reduces brake wear. The clutch-free design cuts maintenance costs.

Superior ride comfort

The AMT 3-speed transmission ensures smooth shifting. Paired with front hydro-pneumatic suspension and airbag shock-absorbing seat, it greatly improves ride comfort.

Safe and reliable

Imported German VOSS brake system offers superior sealing performance and long pipeline pressure retention time for safer braking performance.



LT145E

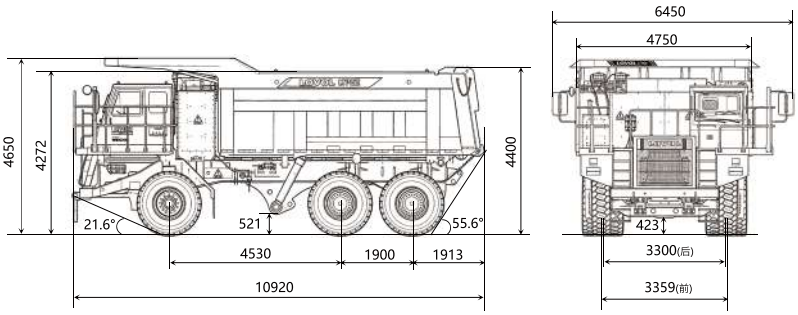
Suitable for typical working conditions

Suitable for overburden stripping in large open-pit coal mines and metal mines, and mainly applied to haulage working conditions featuring heavy-load uphill and level-road transportation.

Economic Benefit Estimation

Calculated based on an average fuel price of $1.43, an average electricity price of $0.143 and an annual operating mileage of 60,000 km, it delivers an annual operating cost saving of $190,000 compared with fuel-powered machines, representing an 66% reduction in operating costs.

PRODUCT SPECIFICATIONS



SPECIFICATIONS	
Gross vehicle weight (kg)	151000
Rated motor power (kW)	660
Payload (kg)	95000
Standard cargo box (m^3)	55
Battery capacity (kW·h)	801
Max. speed (km/h)	40
Max. gradeability (%)	35
Min. turning diameter (m)	28
Overall dimensions (L×W×H) (mm)	10920×4750×4650
Max. cargo box tipping angle (°)	46
Rated axle load (t)	35+55+55

PRODUCT FEATURES

Energy-saving& efficient
Equipped with 2C ultra-fast charging lithium iron phosphate battery and four-gun fast charging, it only takes 18 minutes to raise the SOC from 20% to 80%s. Matched with mature control program and mainstream industrial controller, it delivers high attendance efficiency and excellent energy utilization ratio.

Safe and reliable
It adopts coordinated control of three braking modes: air braking, electric energy recovery braking, and hydraulic retarder braking. Emergency steering intervenes automatically to greatly improve driving safety.

Comfortable & durable
Wide widened cab with air suspension seat, ergonomic layout. Combined with high-strength welded frame and full hydraulic-gas spring suspension, it delivers superior ride comfort and outstanding durability under harsh working conditions.

Stable & fast
It features a maximum outer wheel width of 4400mm, large-bore three-stage lifting cylinders, and a dual-cylinder center-lift structure, delivering abundant lifting force for steadier and faster unloading.

GLOBAL SERVICE NETWORK



Lovol Heavy Industry shares the global marketing and service network belonging to major affiliated companies of Shandong Heavy Industry Group, and this network covers more than 120 countries and regions around the world. Lovol Heavy Industry has laid out strategic markets in Latin America, Southeast Asia, Africa, and the Commonwealth of the Independent States (CIS). It has formed a five-in-one global marketing and service network comprising sales, service, parts supply, user training, and information feedback.





1 Lovol Heavy Industry Headquarters
QingDao Industrial Cluster



2 Commonwealth of Independent States



3 Southeast Asia
Marketing Service Cluster



4 South America Service Cluster



5 North Africa
Marketing Service Cluster



6 Middle Africa
Marketing Service Cluster

APPLICATION CASES


























LOVOL
FR390F-EP


LOVOL
FR600F-EP


LOVOL


LOVOL
FL950-E


LOVOL LT130E



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