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# DT145

## Series Mining Truck

High loading capacity, low energy consumption, high efficiency,  
low emission, high safety and long service life

Rated load capacity: 91000kg  
cargo bucket capacity: 52m<sup>3</sup>



To be the leading supplier of engineering transportation solution and equipment

As a low-carbon, intelligent and high-end machine, DTE145 Series Mining Truck is developed according to the mining equipment procurement standard of international mining industry, and used for large-scale open pit mine. This series of mining truck is a new-generation off-road transport machine integrating features of high reliability, long service life, high efficiency, low-carbon emission and high safety, capable of effectively helping the carbon reduction process of global mining industry.

DT145 Series Mining Trucks include the DTE145 Electric Mining Truck and DTH145 Hybrid Mining Truck. DTE145 Electric Mining Truck is suitable for operating environments with abundant and stable power supply resources. DTH145 Hybrid Mining Truck is designed for global operating conditions.

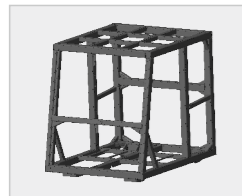
## Product Highlights:

- Ultra-high transport capacity:**  
 with the rated load of 91 tons, the annual transport capacity can reach up to 600,000m<sup>3</sup>, meeting the demand for large-scale mining transport machine.
- Ultra-low energy consumption:**  
 an intelligent energy management system is equipped, achieving higher energy utilization rate and significantly reducing the energy consumption compared with fuel-powered vehicles.
- Stability and reliability:**  
 it features an integrally welded frame structure, front and rear oil-gas suspension, and "A-frame + transverse stabilizer bar" guiding structure, greatly enhancing the chassis reliability.
- Comfort and convenience:**  
 it utilizes a fully oil-gas suspension system with the no-load vibration isolation rate of over 70%, effectively absorbing non-spring-loaded vibrations, and greatly enhancing driving comfort.
- Extended service life:**  
 benchmarking with the mining vehicle design standards, and applying the CAE simulation technology to optimize the key component structures, it achieves a safety factor exceeding 3 times, ensuring a vehicle service life of over 8 years.
- Global adaptability:**  
 both high-power dual motors and automatic transmission are equipped, making it suitable for various harsh road conditions and large-scale attachments.



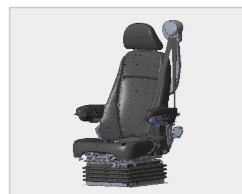
## Main Structural Characteristics:

### 1 Cab assembly



FOPS&ROPS certified cab is equipped, making it safer.

### 2 Driver's seat



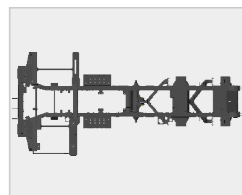
it features an air suspension seat with a built-in air pump, offering excellent shock absorption. The seat can be adjusted horizontally, the backrest angle can be adjusted, and the headrest can move up and down. The overall cab design adheres to ergonomic principles, ensuring all driver operations for hands and feet are within comfortable ranges, providing an excellent driving experience.

### 3 Cab visibility



the combined scheme of "rear mirror + 360° panoramic image" is applied, ensuring the sufficient visibility

### 4 Frame



the frame is designed into an ultra-large section box beam welded structure, and manufactured by using robotic welding technology. Multilayer and multichannel welding ensures superior welding quality. High-strength and high-toughness forged components are used in critical parts, providing the frame with excellent torsion resistance and impact toughness. The overall frame achieves a safety factor exceeding 3 times, making it sturdier, more reliable, and impact-resistant, capable of withstanding loading impacts of 7-10 m<sup>3</sup>.

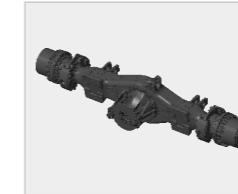


### 5 Suspension system



the fully oil-gas suspension system was independently developed. The front suspension adopts a longitudinal and transverse thrust rod combined with a single-sided oil-gas suspension. The rear suspension optimizes an A-frame with coupled single-sided oil-gas suspension in the rear middle. The stiffness and damping of fully oil-gas suspension are optimized through the dynamics analysis for complete vehicle, making high load-bearing capacity and enhanced comfort.

### 6 Axle



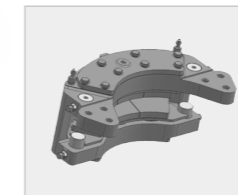
the front, intermediate and rear axles are all cast types with thickened axle housings, providing the high load-bearing capacity.

### 7 Wheel assembly



505/95R29 reinforced tires are made from high-strength skeleton materials and used for wheels. The rims are large-specification 29-inch tubeless types, featuring thickened rim spoke plates made of high-strength steel for enhanced strength reliability.

### 8 Brake system



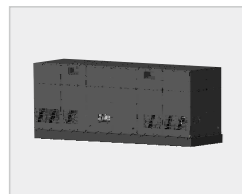
there are four sets of brake systems: service brake, parking brake, electric retarder assistance brake and emergency brake. Additionally, the brake system is equipped with a reliable safety failure mechanism, significantly ensuring the safe and reliable braking performance for the vehicle in all conditions.

## 9 Lifting system



it features a dual-cylinder forward lifting method. The lifting and lowering of cargo can be controlled via those switches on the control panel in cab, ensuring the convenient operation.

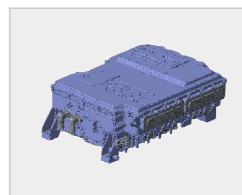
## 10 Power System



DTE145 Electric Mining Truck is equipped with high-safety lithium iron phosphate batteries with a maximum continuous charge/discharge rate of 3C, shortening the charging time for about 30% under the same energy capacity. The battery's protection level reaches IP68. It is equipped with liquid cooling, liquid heating and heat insulation system, enabling operation in environments from -35°C to 45°C, and meeting the requirements for various regions.

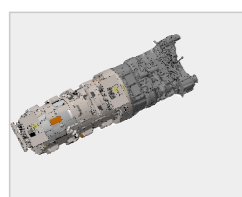
DTH145 Hybrid Mining Truck employs an advanced range-extended electric drive system specifically designed for high-tonnage mining trucks. When the vehicle is going uphill, the engine operates within an optimal economic rotating speed to generate and supply power continuously; when the vehicle is going downhill, the battery can recover the energy, saving over 10% energy compared with the traditional fuel-powered vehicles.

## 11 All-in-one Controller



It provides more than 60 fault protection functions, including: overcurrent, overvoltage, undervoltage, overheating, output phase loss, overload, short circuit and power limitation, ensuring the stability and reliability of electrical system.

## 12 Driving Motor



It is equipped with the high-efficiency dual motors specifically designed for mining trucks. Additionally, it is armed with the new transmission, making the strong power, high efficiency, easy handling and seamless operation across all operating conditions.



## 13 Electrical Safety



1. High-voltage system protection: high-voltage components can reach the protection level of Ip67.

2.Battery system safety protection: in the design of housing and modules, full consideration is given to the absorption of expansion forces, insulation, and short-circuit prevention, as well as protection against mechanical vibration, shock, collision, compression, water ingress, fire, and explosion during cell charging and discharging. The thermal management system adopts a water-cooling mode to control temperature rise and temperature differences during battery charging and discharging, ensuring efficient thermal balance.

3.Pre-charging circuit protection: the high-voltage system applies a pre-charging circuit to pre-charge the high-voltage equipment, preventing high-voltage electrical surge during connection, and protecting the battery cells and battery system circuit connector from being burnt out.。

## 14 Driver's State Monitoring



DSM cameras are used to capture images. Through technologies such as visual tracking, object detection, and action recognition, it monitors the driver's driving behavior and physiological state, effectively regulating driver's behavior and significantly reducing the likelihood of traffic accidents.

## 15 360° Panoramic Driving Assistance System



By installing cameras at the front, rear and both sides of the vehicle, the system presents a 360-degree bird's-eye panoramic view without blind spots, safeguarding the driver for whole driving process and enhancing the fleet safety factor.

Model		DTE145	DTH145
Engine	Model	---	Yuchai YCK16775-T300
	Power (kW)	---	570
	Maximum torque (N·m)	---	3200
FISGmotor	Type	---	Permanent magnet synchronous motor
	Manufacturer	---	Yuchai
	Power (kW)	---	400
Fuel tank volume (L)		---	900（710+190）Double-chamber iron fuel tank
Drive motor	Model	LegoEM620-900	Lego EM620-540
	Power (kW)	620/900	620/900
Transmission	Model	FAST3E560	AMT transmission
Power battery	Battery type	Lithium Iron Phosphate	Lithium Iron Phosphate
	Rated storage energy (kWh)	800	176
Front suspension	Suspension type	Hydro-pneumatic suspension	
	Cylinder parameter	Cylinder diameter: 200mm; travel: 240mm	
Rear suspension	Suspension type	Hydro-pneumatic suspension	
	Cylinder parameter	Cylinder diameter: 220mm; travel: 270mm	
Lifting system	Lifting cylinder	Hyva USE191 (dual-cylinder forward lifting)	
	Lifting time (s)	30	
	Lowering time (s)	20	
Steering system	Type	Fully hydraulic steering + emergency steering	
Brake system	Brake form	Full hydraulic clamp disc brake system	
	Brake circuit	Dual Circuit	
Axle		Thickened axle housing 35t+55t+55t	
Tire spec		505/95R29	
Drive form		6×4	
Standard bucket capacity (m²)		52	
Curb weight (kg)		60000	58000
Rated load capacity (kg)		91000	
Maximum total weight (kg)		151000	149000
Outline size (L×W×H) (mm)		10850×4960×5050	10850×4960×4715
Wheel base (mm)		4200+1900	
Wheel tread (front / rear)		3140/3240	3140/3240
Minimum ground clearance (mm)		450	
Approach angle / departure angle (°)		27/50	24/50
Maximum speed (km/h)		≥50	≥45
Maximum climbing slope (%)		≥35	
Minimum turning radius (m)		13	
Maximum angle of bucket lifting (°)		48	48
Optional Equipment		Air conditioning, electronic control protection device,reversing camera, reversing horn, anti-rock device, vehicle intelligent terminal (TIMS), tail bumper	

Characteristic Service

Comprehensive Package for Maintenance Service

- It is tailored for users with vehicle repair challenges, providing comprehensive repair service solutions based on user paint points and needs. Those services, including: driving operation training, daily vehicle inspections, maintenance, repairs, procurement and storage of parts and consumables, as well as repair team formation and management, provide professional training and repair, significantly improving vehicle attendance rate, reducing management difficulties, and extending the product lifecycle.

Professional Training

- The operation training, maintenance training, management personnel training, safety training and special trainings are organized and implemented exclusively.



Lifelong Technical Consulting Service

- Product lifelong technology upgrading and improvement service
- All-round mine engineering transport solution

Service Objective

- Create the first service brand of wide-body dump truck

Service Commitment

- During the warranty period, the equipment attendance rate is guaranteed to be no less than 90%

Technology Hotline  
029-38001222

Service Hotline  
029-38001210 400-6863853

## Application Cases

