TONLY

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As a low-carbon, intelligent and high-end machine, DT145 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 600,000m³, 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.

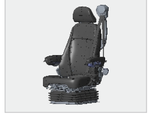
- **Global adaptability**:
  both high-power dual motors and automatic transmission are equipped, making it suitable for various harsh road conditions and large-scale attachments.

## Main Structural Characteristics:

### 1 Cab assembly

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

### 2 Driver's seat

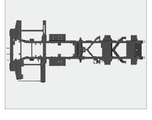


it features an air suspension seat with a built-in air pump, offering excellent shock absorption. The seat can be adjusted horizontally, the backrest angle can be adjusted, and the headrest can move up and down. The overall cab design adheres to ergonomic principles, ensuring all driver operations for 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 $m^3$.

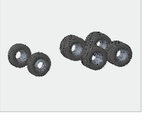

### 5 Suspension system

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

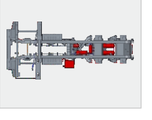
the front, intermediate and rear axles are all cast types with thickened axle housings, providing the high load-bearing capacity.

### 7 Wheel assembly



530/95R29 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



Adopts pneumatic brake system, integrated with EBS (Electronic Braking System). This significantly shortens brake response time and pressure build-up time, continuously monitors brake and their components. Enjoying brake management function and brake comfortable. Equipped with emergency braking function and anti-rollback function.

## 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℃ to 45℃, 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 EM620-900 |
| | Power (kW) | 620/900 | 620/900 |
| Transmission | Model | AMT 4E560 | AMT 4E560 |
| Power battery | Battery type | Lithium Iron Phosphate | Lithium Iron Phosphate |
| | Rated storage energy (kWh) | 801 | 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: 350mm | |
| Lifting system | Lifting cylinder | Hyva USE191 (dual-cylinder forward lifting) | |
| | Lifting time (s) | 28 | |
| | Lowering time (s) | 25 | |
| Steering system | Type | Fully hydraulic steering + emergency steering | |
| Brake system | Brake Type | Drum Brake | |
| | Brake Circuit | Four-Circuit | |
| Axle | | Thickened axle housing 35t+55t+55t | |
| Tire spec | | 530/95R29 | |
| Drive form | | 6×4 | |
| Standard bucket capacity (m³) | | 52 | |
| Curb weight (kg) | | 61000 | 58000 |
| Rated load capacity (kg) | | 91000 | |
| Maximum total weight (kg) | | 152000 | 149000 |
| Outline size (L×W×H) (mm) | | 11400×6250×4750 | 11022×6250×4658 |
| Wheel base (mm) | | 4200+1900 | |
| Wheel tread (front / rear) | | 3130/3320 | 3130/3320 |
| Minimum ground clearance (mm) | | 400 | |
| Approach angle / departure angle (°) | | 20/49 | 20/49 |
| Maximum speed (km/h) | | ≥45 | ≥45 |
| Maximum climbing slope (%) | | ≥35 | |
| Minimum turning radius (m) | | 12 | |
| 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




**To be the leading supplier of engineering transportation solution and equipment**