



XDR100

HAUL TRUCK

91
Rated load
t

783/2100
Rated power
kW/rpm

60
2:1 heaped loading configuration
m³



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Xcmg Mining XCMG MINING



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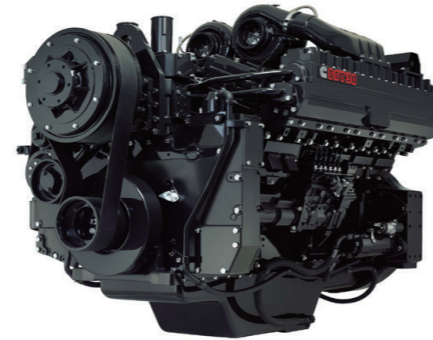
01

HIGH-EFFICIENCY
TRANSPORTATION

XCMG Group offers over 400 models of mining equipment across multiple powertrain solutions including pure-electric, hybrid, and hydrogen technologies. Our comprehensive product portfolio covers the complete construction workflow - drilling, excavation, loading, hauling, grading, dozing, watering, and crushing. The equipment range includes drilling rigs, mining excavators, loaders, dump trucks, bulldozers, motor graders, water trucks, and crushing/screening equipment, serving diverse sectors like coal mining, metal mining, construction materials, water conservancy, and port operations.

High-Performance Engine

- Powered by Cummins QST30 electronic diesel engine, compliant with China Non-Road Stage III and U.S. EPA Tier 2 emission standards.
- Advanced electronic monitoring system for real-time cylinder status tracking, optimizing engine longevity and operational efficiency.
- Modular common rail fuel system ensures precise fuel injection timing, air intake regulation, and emission control for reliable high-performance output.
- Dual electronic control modules guarantee peak engine performance across varying altitudes and load conditions.



Drive System

- Synergistic engine-transmission-drive axle integration maximizes power delivery efficiency.
- Standard Allison H8610 ORS CEC5 transmission features electronically controlled automatic shifting with six forward gears and one reverse gear.
 - Integrated transmission system combining torque converter, hydraulic retarder, and gearbox components.
 - Multi-functional capabilities including hydraulic retardation, neutral start protection, power/economy mode selection, lift/reverse interlock, and lift speed control.
- Modular installation design for transmission, engine and rear axle enables sustained heavy-duty gradeability operations with dual-stage reduction configuration.
- The heavy-duty rear axle features a full-floating half-shaft design with a primary spiral bevel gear main reducer and dual-stage planetary wheel reducers. This configuration ensures the half-shafts bear only torsional loads, significantly extending rear axle service life. The high reduction ratio design provides exceptional overload driving capability.

Retardation System

The XDR100 incorporates dual retardation systems: a transmission hydraulic retarder and a rear wet disc brake retarder. The transmission hydraulic retarder delivers 1,044 kW of retardation power, while the rear wet disc brake retarder provides 920 kW. An independent oil cooling system prevents overheating during prolonged retardation, ensuring continuous operation capability. This system meets the braking demands of fully-loaded continuous descents, enhancing both operational safety and productivity.

Weighing System

The on-board weighing system is designed for payload data detection and analysis, aiming to optimize the payload and maximize productivity, while reducing the machine's life cycle costs.

The onboard weighing system tracks and records the following key production parameters:

- Total number of shipments
- Total transportation weight
- Percentage distribution of payload
- Time and distance of unloaded and loaded conditions



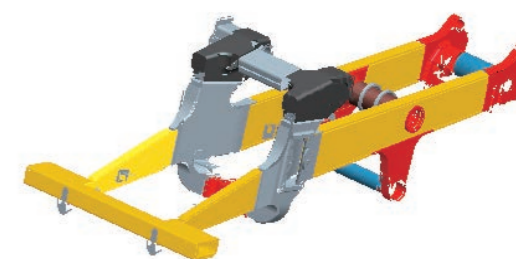
02

RELIABLE AND DURABLE



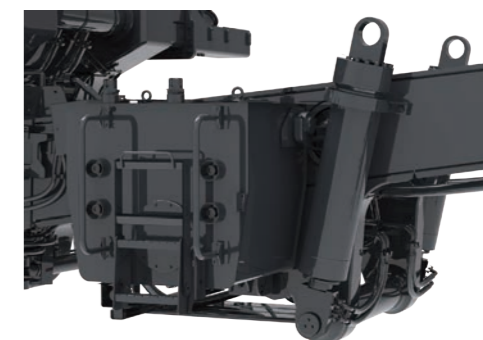
100-Ton Class Frame Design

The XDR100's frame utilizes a box-section longitudinal beam with reinforced ring beam construction. Critical stress concentration zones and support areas incorporate cast steel components to withstand dynamic loading in extreme operating conditions. CAE software is employed to analyze and optimize the frame's strength, stiffness, and fatigue resistance, achieving lightweight design while enhancing structural integrity.



Simple and Reliable Hydraulic System

The hydraulic system features a streamlined and reliable design, utilizing minimal components to integrate steering, braking, lifting, and cooling functions. With a modular design approach, the lift valve assembly is mounted on a unified bracket for efficient servicing and replacement. Multiple stages of hydraulic oil filters ensure high filtration precision, large contamination capacity, and extended maintenance intervals.



Body

The carriage is constructed through welding high-strength wear-resistant plates with quenched/tempered low-alloy steel, with critical welds undergoing ultrasonic inspection. The cargo compartment interior boasts exceptional wear and impact resistance to maximize payload capacity. Options include heated cargo compartments, with customizable lightweight variants available per customer specifications.



UNLIMITED INNOVATION

03 COMFORT AND SAFETY

Ergonomically Designed Driver's Cab

- ROPS&FOPS-certified cab utilizes high-strength steel trusses and a composite floor structure with multi-axis reinforcement. Strategic positioning of cab and vehicle overhangs ensures optimal driver safety.
- Multi-layer acoustic insulation neutralizes external mechanical noise exceeding 80dB(A), enhancing speech intelligibility by 30%.
- Features suspended vibration-damping high-back seats that absorb impacts from uneven terrain and gravel, minimizing driver fatigue and arm vibration, enhancing control precision while reducing long-distance driving fatigue by 70%.
- The cab comes equipped with an onboard controller, tilt-and-telescope steering wheel, electric windshield wipers/washers, tinted glass, and climate control, with real-time monitoring of vehicle parameters and fault alerts.
- Panoramic windshield with wide-angle rearview mirrors provides exceptional visibility; optional 360° camera system eliminates blind spots during complex terrain maneuvers.
- Optional collision mitigation system detects hazards ahead, issuing alerts and automatically applying braking to ensure driver safety.

User-friendly Display Screen

The XDR100 features an ergonomic instrument cluster with CAN-bus digital display and functional switches, enabling real-time monitoring of vehicle status and diagnostics during operation. The instrument cluster integrates the display of engine, hydraulic system, and weighing system status information, along with fault alerts. It also provides equipment information display and configurable function/permission settings.



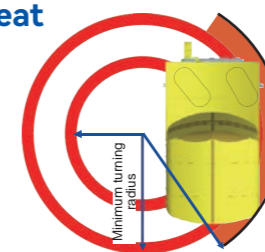
Comfortable and Durable Suspension System

The suspension system employs four oil-gas suspension cylinders to mitigate road impacts during transport and loading, thereby extending frame lifespan. The front suspension features a candle-type independent design, ensuring superior steering stability and smooth operation for dump trucks. The rear suspension features a longitudinal triangular trailing arm design, allowing for axle case swing to effectively absorb the bending and torsional stress of rough terrains.



Multi-directionally Adjustable Seat

Driver ergonomics are crucial for both safety and productivity. The XDR100 comes equipped with premium air-suspension seats that effectively dampen vehicle vibrations to reduce operator fatigue. The seat is adjustable in multiple directions. It works in tandem with a retractable/tiltable steering column to accommodate different driving postures for improved comfort. Includes ergonomic accessories: seat armrests, safety belts, and headrests.



Reliable and Safe Braking Control

A mature and reliable braking system ensures the vehicle's safety and efficiency during operation, boosting the driver's confidence and allowing them to focus more on transportation tasks. The XDR100 features front caliper discs and rear oil-cooled wet disc brakes, delivering comprehensive braking functions (service, parking, retarder, and emergency). When combined with the transmission's hydrodynamic retarder, this hybrid braking system ensures exceptional stopping performance across all operating speeds. Independent front/rear control circuits are each equipped with accumulators for emergency braking redundancy.

Agile and Flexible Steering Performance

The XDR100 features a dual-link disengaged trapezoidal steering mechanism, delivering superior steering precision while minimizing tire wear. Powered by a double-acting hydraulic steering cylinder with an integrated steering accumulator for emergency control, the steering system complies with ISO 5010 standards. With a compact 12-meter turning radius, the vehicle's high maneuverability ensures safe and efficient operation on mine haul roads.

04 EASY MAINTENANCE

Convenient Maintenance Access

The XDR100 incorporates maintenance-friendly design features to facilitate quick and convenient servicing. Maintenance ladders are provided on both sides of the front longitudinal beams to offer convenient access for engine inspection and maintenance. The front bumper integrates an engine emergency stop switch and ladder light controls, while service platforms are provided at both the fuel tank and hydraulic oil tank for technician accessibility.

Modular Design for Easy Assembly and Disassembly

XDR100's modular architecture simplifies disassembly, installation, transportation, and maintenance operations. In particular, the frame and rear axle adopt an installable joint bearing seat, which simplifies assembly and disassembly, reduces downtime for maintenance, and enhances vehicle availability.

Quick Refueling System

Ground-level quick-refuel ports are positioned on both sides of the mid-frame section for operator convenience.



FUNCTION

Full-Automatic Centralized Lubrication System

The XDR100 features a fully automated centralized lubrication system that thoroughly lubricates 22 articulation points of the vehicle's critical moving components. This system reduces maintenance time, enhances service quality, and minimizes maintenance workload. The automated lubrication system incorporates pressure monitoring capabilities and adjustable lubrication intervals.



LCD Screen

- The LCD dashboard display in the cab facilitates installation, maintenance, and troubleshooting operations.
- The display's home screen presents essential driving data including vehicle speed, engine RPM, and coolant temperature, enabling drivers to monitor overall vehicle status conveniently.





Promise To You

XCMG MINING MACHINERY'S
COMMITMENT TO YOU

CUSTOMIZED SERVICES TO ACHIEVE A FULL-CYCLE, ALL-AROUND EXCLUSIVE SERVICE FOR CLIENTS—MANAGER—DELIVERY—PROJECT OPERATION & MAINTENANCE—SERVICE—BUSINESS.

XCMG forms a management team centered around client managers, solution managers, and delivery managers, working efficiently and collaboratively with deep client interaction to provide full-cycle, comprehensive services for customers.

XDR100

DUAL-AXLE RIGID MINING TRUCKS

TECHNICAL PARAMETERS

Engine

Model	QST30
Emission standard	GB 20891-2014 China III/U.S. EPA Tier 2
Fuel	Diesel
Cylinder No.	12
Stroke	4-stroke
Total horsepower*	783kW(1050hp)@2100
Flywheel power*	728kW(976hp)@2100
Weight (wet)	3555kg
Weight (dry)	3435kg

*Total power is the output power at the rated speed of the engine installed in this machine. Accessory losses include the water pump, fuel pump, and oil pump.
**Net flywheel power is the rated power at the engine flywheel minus average accessory losses. Accessories include the fan and the alternator, Compliant with SAE J1349 standard

Transmission

Model	8610 ORS
Gearshift control	Electronically controlled automatic transmission with automatic lock-up for all forward gears
Position	6 forward gears + 1 reverse gear
Gear ratio	4.24; 2.32; 1.69; 1.31; 1; 0.73; -5.75
Torque converter model	TC890
Torque converter coefficient	1.86
Retarding power	1044kW (1400hp)
Maximum speed	48km/h

Rear axle

Type	Full-floating type
Wheel reducer type	Two-stage planetary
Final ratio	2.16
Speed ratio of hub reducer	13.75
Overall gear ratio	29.70

Tires and rims

Tubeless, radial tire, standard tire*	27.00R49
Five-piece rim	19.5/4.0
Total tire weight	8610kg

*Tires should meet standards for their TKPH/TMPH ratings, tread pattern, compound composition, inflation pressure, ply rating, or equivalent factors.

Cab

The ROPS/FOPS cab, which aligns with ISO 3471/ISO 3449 (Level II) standards for anti-rollover/anti-falling object protection, offers a spacious interior and a broad field of vision. It is fully equipped with a variety of instruments, alarms, lighting, control switches, and a radio, among other amenities. The driver's seat is an adjustable, air-suspended type with damping and a high backrest, and there is also a seat for the co-driver. Equipped with a vehicle control unit, tilt-and-telescope steering wheel, electric windshield wipers with washers, tinted windows, and climate control air conditioning. All vehicle operating parameters and fault alerts are displayed on the LCD instrument panel.

Suspension

Variable oil/nitrogen suspension cylinder with integrated rebound control	
Max. stroke of front suspension	320mm
Max. stroke of rear suspension	200mm
Max. lateral swing angle of rear axle	±7°

Frame

The frame consists of left/right longitudinal beams and cross members, forming an enclosed structure. Both longitudinal and transverse beams feature box-section designs to eliminate stress concentration points that could lead to bending or cracking. The frame is constructed of high-quality, low-alloy, and high-strength steel, with castings used in high-stress areas to increase the frame strength. All critical welds are 100% inspected using ultrasonic testing.

Installation of drive axle	Connected by pin shaft, knuckle bearing and bushing
Lateral positioning of drive axle	Connected by a lateral stability tie rod

Standard cargo compartment

Constructed with welded high-strength wear-resistant plates and low-alloy high-strength tempered steel plates for extended service life. Equipped with safety pins, cargo compartment damping pads, and rear wheel stone ejectors.

Base plate	20mm
Front plate	10mm
Side plate	8mm
Cap plate	6mm
Flat loading	42m ³
Heaped loading (SAE 2:1)	60m ³
Standard XCMG cargo compartment weight	15230kg

*Customizable according to customer requirements

Brake System

Front brake	980mm brake discs with caliper disc brakes
Front Brake Pressure	15Mpa
Rear brake	Oil-cooled multi-disc
Rear brake pressure	5.2Mpa
Parking brake	Hydraulically released, spring-applied rear brakes
Retarder brake	Rear axle wet disc brakes and transmission hydraulic retarder
Emergency brake	Simultaneous service brake and parking brake application

Cooling system

The engine features a detachable tube-belt radiator for easy maintenance and replacement. The gearbox and rear axle wet disc brakes are cooled by an oil cooler.

Hydraulic system

Steering	The variable plunger pump supplies hydraulic power for steering, offering minimal steering wheel torque, rapid response, high precision, and smooth operation. The accumulator provides emergency steering hydraulic power supply.
Turning diameter	24m
Filter	Oil suction filter 250μm Oil return filter 10μm High-pressure filter (7μm)
Steering/brake pump	Constant-pressure plunger pump Flow rate: 94.5 L/min @ 2100 rpm Maximum working pressure: 159 bar
Lifting pump	Duplex gear pump Displacement: 206.5 cc/rev Maximum working pressure: 190 bar
Cooling pump	Duplex gear pump Displacement: 369.6 cc/rev Maximum working pressure: 100 bar

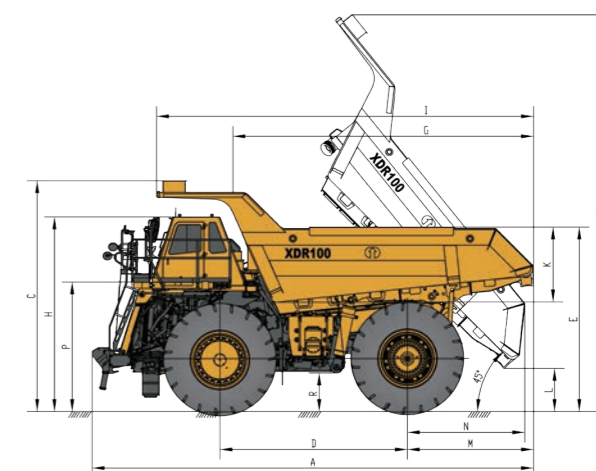
Electrical system

4 × 975CCA, 12V batteries (series/parallel configuration), platform-mounted with disconnect switch

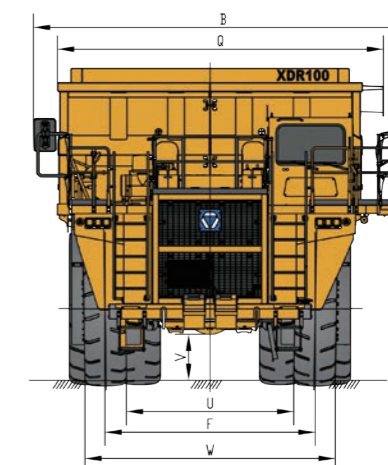
DC generator	24V/115A
Light device	24V
Starter motor	2个/24V

Oil filling amount

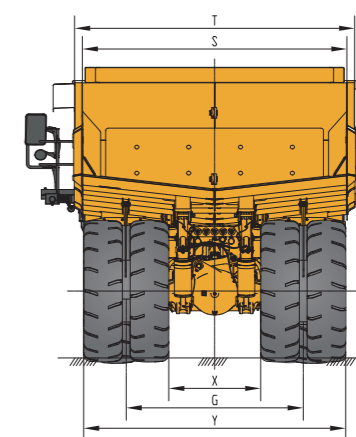
Cooling system	350L
Crankcase	134L
Hydraulic system	730L
Gear oil	PTO: 4L Front axle (per side): 17L Rear axle (per side): 50L Rear axle (main reduction): 70L
Transmission oil	100L
Fuel tank	1050L



C:5600	H:4725	P:3145	I:9150
G:7300	R:935	D:4580	A:10700
N:2850	M:3060	K:1820	L:1050
E:4485	Z:9635		



B:6815	Q:5855	V:780
U:3000	F:3780	W:4480

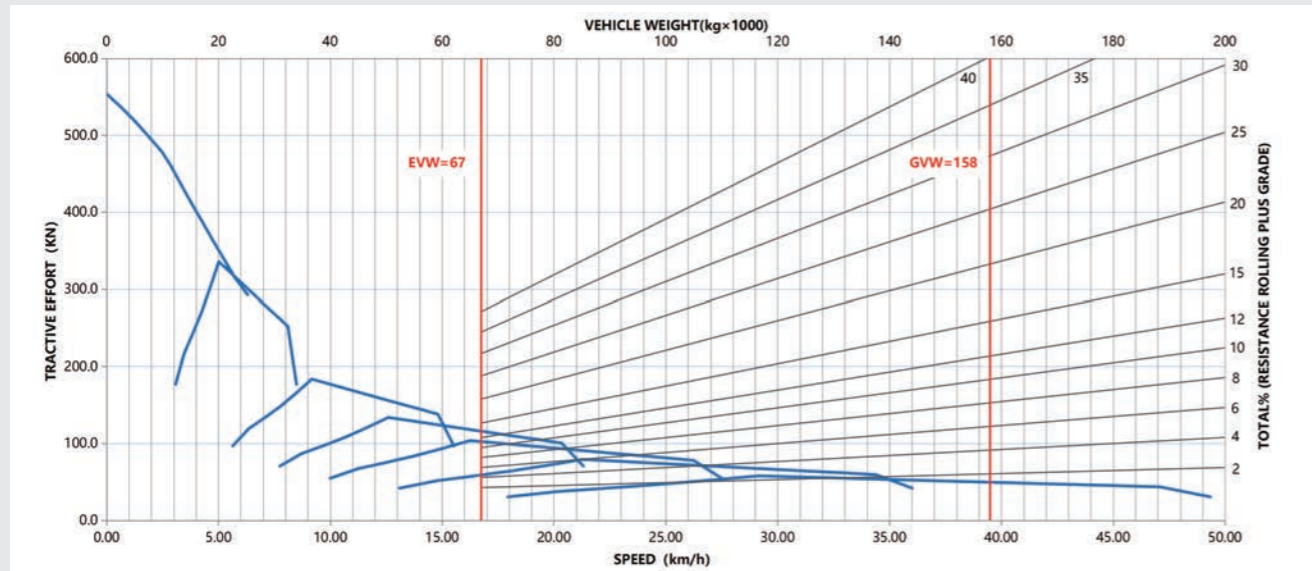


T:5400	S:5100	X:1780
G:3420	Y:5060	

*Standard cargo compartment: 42m³ flat loading / 60m³ heaped loading (SAE 2:1)

Performance Curve

THE CHART IS CALCULATED BASED ON 2% ROLLING RESISTANCE



Empty Vehicle Weight (EVW)

Front axle load distribution (48%)	32320 kg	71253 lbs
Rear axle load distribution (52%)	34790 kg	76699 lbs
Empty Vehicle Weight (EVW)	67110 kg	147952 lbs

Gross Vehicle Weight (GVW)

Front axle (32%)	50460 kg	111245 lbs
Rear axle (68%)	107540 kg	237085 lbs
Gross Vehicle Weight (GVW)	158000 kg	348330 lbs

Load capacity

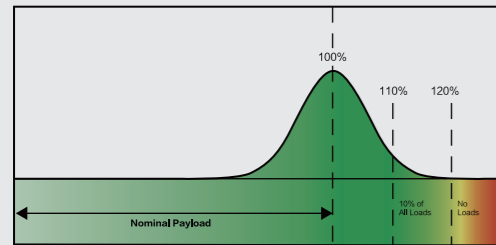
Payload	91000 kg	200621 lbs
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* Rated payload includes all optional accessories

USAGE AND PRECAUTIONS FOR THE EQUIPMENT

XCNG Mining Truck Loading Specifications

The loading specifications define the loading guidelines and restrictions for XCMG mining trucks:



- Gross Vehicle Weight (GVW) includes chassis, cargo compartment, tires, accessories, lubricants, fuel, operator, and payload plus any excess material accumulation;
- Empty Vehicle Weight (EVW) includes standard chassis, standard cargo compartment, tires, accessories, lubricants, fuel, and operator;
- Rated payload equals Gross Vehicle Weight (GVW) minus Empty Vehicle Weight (EVW);
- Monthly average payload must not exceed the vehicle's rated payload;
- Actual payload ≤ 110% of rated payload (≥90% occurrence);
- 110% of rated payload ≤ actual payload ≤ 120% of rated payload (≤10% occurrence);
- Under no circumstances shall actual payload exceed 120% of rated payload.

Note:

1. The graphics and information in this brochure reflect the technical characteristics and configuration standards of given models at the time of composition. The current information and data are derived from standard usage testing. The above data and information are for reference only; please refer to the actual product.
2. This brochure is for reference only and has no contractual effect. For detailed information, please contact your local XCMG Mining Machinery dealer.
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Standard Configuration

- Self-cleaning air filter
- DC generator (24V/115A)
- Automatic Lubrication System
- Backup Alarm
- Batteries - 4 units, 975CCA each
- Battery charging/jump-start connector
- Cargo compartment position limiting device
- Cargo compartment safety pin
- Front brake: dry disc brake
- Rear brake: wet disc brake
- Electric start
- Rapid refueling system (on fuel tank & hydraulic oil tank side)
- Hydraulic high-pressure filter
- Mirror:
 - Left side: convex mirror with heating
 - Right side: convex mirror, with heating
- Mudguard
- Power supply: (1) 24V DC and (1) 12V DC
- Quick coupling (for lifting and diagnosis)
- Radiator liquid level indicator

Operating Environment and Control

- Full hydraulic service brake with auto-engagement function
- Power switch
- Neutral start protection
- Lift-reverse gear interlock
- High-speed lift control
- 24V circuit breaker
- Engine emergency stop button-ground
- Horn (electric, front-mounted)
- Integral ROPS/FOPS (Benchmark II) driver's cab
- Parking brake with warning light
- Power steering system with automatic auxiliary steering
- Deck handrail
- Radiator fan cover
- Seat belt: standard three-point type
- Anti-skid passage
- Engine access platform, left/right

Light Device

- Reverse lights - rear mounted (2xLED)
- Reverse lights - left/right deck mounted (2xLED)
- Turn signal/marker lights (4xLED)
- Transmission retarder indicator - rear (2xLED)
- Engine compartment inspection lamps (2xLED)
- Fog lamps (2xLED)
- Headlamps (4xLED)
- Ladder lamp and platform lamp LED
- Brake lamp, rear (2) LED

Standard Luxury Driver's Cab

- LCD instrument cluster
- Air conditioner R-134A
- AM/FM radio with USB and MP3
- Turbocharger clogging alarm
- Dome lamp

Standard Luxury Driver's Cab

- Multi-purpose driver's display panel
 - Light status
 - Engine hours, oil pressure, water temperature, engine oil temperature, fuel level
 - Mileage, speed and duty load
 - Time
 - System voltage
 - Engine red light and yellow light alarm
 - Low system voltage
 - Low engine coolant level
 - Gear position indicator
 - Parking brake indicator, service brake indicator
- Floor mat (double-layer baffle)
- Fuel gauge of the cab
- Low fuel level indicator lamp and buzzer
- Backlit instrument panel
- Headlamp switch
- Heater and defroster (heavy-duty)
- Radiator switch
- High beam light selector and indicator
- Horn (steering wheel center)
- Weighing system display
- Driver's seat - adjustable with air suspension and armrests
- Adjustable panel lighting
- Front passenger seat
- Positive pressure cab
- Rear axle wet disc retarder control lever
- Hydraulic brake pedal
- Adjustable sun visor
- Telescoping/tilting adjustable steering column
- Voltmeter (battery output monitoring)
- Windshield (tinted safety glass)
- Dual windshield wipers with electric washers

Optional Devices

- Note: Optional devices may change working weight.
- 1000L/min rapid refueling system (on fuel tank & hydraulic oil tank side)
- Power switch lockset
- Customized body
- Body heating
- Body wear plate
- Stone deflector/stone chain
- Hydraulic oil tank ladder
- Fuel tank ladder
- Low-temperature suspension system, at front and rear
- Anti-crush rearview mirror assembly
- Electric heaters (engine coolant/hydraulic oil/fuel)
- Liquid fuel heater (engine coolant)
- Fire extinguisher
- Full-automatic centralized fire extinguishing
- XCMG- 360° panoramic image system
- Weight display - right & left
- Tire stopper
- Cab tool kit
- Suspension inflation kit
- Tire
- Driver's behavior monitoring system
- Tire temperature monitoring system
- Tire pressure monitoring system