

# Mining dump truck BELAZ-75310 with payload capacity of 240 tonnes

Designed for transportation of rock mass in complex technical conditions of deep mines,  
at open cast mining sites on technological roads under various climatic operating  
conditions (at ambient temperature range from -50 to +50 °C).



**Model** CUMMINS QSK 60-C  
Diesel, four-cycle engine with V-type cylinders arrangement, direct fuel injection, electric control system, gas turbine charging and intermediate cooling of the charged air. The engine complies with toxic substances emission requirements of Tier1.  
**Rated power @ 1900 rpm, kW (hp)** 1864 (2500)  
**Maximum torque @ 1500 rpm, N\*m** 9839  
**Number of cylinders** 16  
**Cylinders displacement, l** 60  
**Cylinder diameter, mm** 159  
**Piston stroke, mm** 190  
**Specific fuel consumption at rated power, g/kW\*hr** 206  
Air cleaning is performed by three-stage filter with dry-type elements.  
Exhaust gases evacuation is being made through body structure.  
Lubrication system is of forced circulation type under pressure with "wet" crankcase oil pan design.  
Cooling system is of double-circuit fluid type with forced circulation.  
Cooling system impeller drive – hydraulic clutch with automatic control.  
Oil cooling – through water-to-oil heat exchanger.  
Starting preheating system is of fluid type.  
Starting system features pneumatic starter.  
**Electric system voltage, V** 24

## Transmission

AC electric drive with traction alternator, two traction electric motors, motor-wheel reduction gear units, microprocessor control system, adjustment and control devices.  
Double-row planetary motor-wheel reduction gear unit is of differential type.  
**Max speed, km/h** 64  
**Motor-wheel reduction gear unit ratio** 28.38

Traction alternator	5GTA41
Traction electric motor	5GEB34

## Engine

Conventional suspension for front and rear wheels, cylinders are pneumohydraulic (nitrogen and oil) with in-built hydraulic damper, two cylinders both on the front axle and on the rear axle.  
**Cylinder piston stroke, mm**  
- front 320  
- rear 290

## Suspension

## Steering

Hydrostatic  
Steerable front wheels.  
**Steerable wheels rotation angle, degrees** 39  
**Turning radius, m** 15  
**Overall turning diameter, m** 34  
Complies with ISO 5010 requirements.

## Hydraulic system

Combined hydraulic system for body hoist, steering and brake system.  
Body hoist cylinders are telescopic with three stages and one stage of double action.  
Oil pump is of double-section axial-piston and variable-flow type.  
**Body raising time, s** 22  
**Body lowering time, s** 33  
**Max pressure in hydraulic system, MPa** 18  
**Max delivery of pumps @ 1900 rpm, dm<sup>3</sup>/min** 698  
**Filtering degree, μm** 10

## Cab

Two-seat, two-door, with an additional seat for the passenger and pneumatically cushioned adjustable operator's seat. The cab meets the requirements of EN 474-1 and EN 474-6 for permissible limits of internal sound levels, vibration, concentration of poisonous substances and dust. Operator's workplace complies with ROPS safety system requirements. Noise level inside the cab is not more than 80 dB(A).

**Body**  
 Bucket type body is a welded structure with FOPS, has a protective canopy and is heated by exhaust gases. It is equipped with a device for mechanical locking in raised position as well as with rock-deflectors and rock-ejectors.

Body volume, m<sup>3</sup>:  
 struck 102.4                      heaped 2:1 141.1

# BELAZ 75310



## Frame

Frame is a welded structure of high-strength low-alloyed steel. Longitudinal box-section variable height side rails are interconnected by cross-members. Castings are applied in highload zones.

## Braking system

The braking system meets international safety requirements according to ISO 3450 and comprises service, parking, auxiliary and emergency brakes.

**Service brake:**

Front wheels – dry disk brakes with automatic clearance adjustment.  
 Rear wheels – dry disk brakes with automatic clearance adjustment. The disks are mounted on the shafts of traction electric motors.

**Parking brake:**

Constantly closed brake gears for rear wheels. Spring actuation, hydraulic control.

**Auxiliary brake:**

Electrodynamic braking with traction electric motors in alternator mode with forced air cooling of brake resistors.

**Emergency brake:**

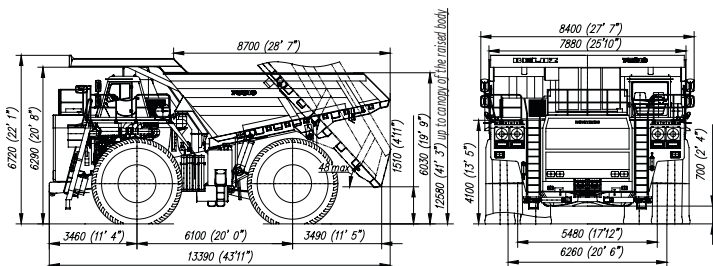
Parking brake and intact circuit of service brake are used.

Brake resistors 17EM155  
 Power dissipation, kW 3000

## Special equipment

- Fire-fighting system with remote control (standard)
- Engineliquid preheater (standard, except for tropical modification of dump trucks)
- Video surveillance system (standard)
- Automatic centralized lubrication system (standard)
- Telemetering tire inflation control system (standard)
- Loading and fuel control system (standard)
- High-voltage line proximity alarm (standard)
- Heater and conditioner unit (standard)
- Fettling of the bottom body (option)
- Enhanced combined fire-fighting system with automatic actuation (option)
- Fuel tank with Wiggins system (option)
- Refueling center (option)

## Overall dimensions, mm



## Weight

Maximum payload capacity of the dump truck, kg	240000
Empty weight, kg	161500
Gross weight, kg	401500
Weight distribution on axles, %:	
empty	
front axle	45
rear axle	55
loaded	
front axle	33
rear axle	67

## Refill capacities, l

Fuel tank	2900
Engine cooling system	635
Enginelubrication system	290
Hydraulic system	790
Motor-wheel reduction gear units	210 (105x2)
Suspension cylinders:	
front	96.6 (48.3x2)
rear	102.0 (51.0x2)

## Tires

Pneumatic, tubeless, with quarry tread pattern.  
 Designation 40.00R57; 46/90R57  
 Internal pressure, MPa — in accordance with tire manufacturer instructions.  
 Rim designation 32.00-57/6.0

## Traction and braking performance

