

BELAZ

MINING DUMP TRUCK BELAZ-7513D

130-136 TONS



SPECIFICATIONS

Engine

Engine power at 1900 rpm, kW (hp)	1168(1588)
Torque moment at 1500 rpm, N*m	6500
Cylinders amount	16
Cylinders displacement, L.	52,3
Cylinder diameter, mm	150
Piston stroke, mm.	185
Specific fuel consumption at nominal power, h/kW*h	205
Air purification - three-stage with dry filter elements	
Exhaust gases are released through the body.	
Lubrication system - circulating, under pressure, with a «wet» pan	
Cooling system - liquid, with forced circulation, dual-circuit	
Oil cooling - oil-water heat exchanger	
Pre-heating system - liquid	
Starting system - electric starter	
Voltage in the electrical system, V	24

Transmission

AC-DC electric drive with a traction generator, two traction electric motors, electric motor-wheel gearboxes, control devices, a microprocessor control system and monitoring devices.
The motor-wheel gearbox is two-stage with spur gears.

Maximum speed of the dump truck, km/h	48
Gear ratio of the motor-wheel gearbox	30,36

Traction alternator	GSN-500 (800 kW), GST-1(800 kW) SGT-1000 (1000 kW)
Traction electric motor	EK-590 D, EDP-600

Suspension

Pneumohydraulic, dependent for front and rear wheels with installed hydraulic shock-absorber, by two for front and rear axes.

cylinder piston stroke, mm:
- front 320
- rear 190

Steering

Hydrostatic	
Steered wheels - front.	
Turning radius, m	13
Overall turning diameter, m	28
Complies with the requirements of ISO 5010 standard.	

Hydraulic system

Combined for the body tipping mechanism, steering and braking system. The bodylift cylinders are telescopic, three-stage with one double-acting stage.

Oil pump - axial piston variable displacement	
Bodylifting time, sec.	20
Bodylowering time, sec.	18
Maximum pressure in the hydraulic system, Mpa	18
Maximum pump performance at 1900 rpm, L/min	474
Filtration degree, microns	10

Cabin

Double, two-door, with an additional seat for a passenger, the driver's seat is air-sprung, adjustable. Meets the requirements of standards (EN 474-1 and EN 474-6) establishing levels of internal noise, vibration, concentration of harmful substances and air dust. The driver's workplace meets the requirements of the ROPS safety system. The soundlevel in the cabin is no more than 80 dB(A).

Brake system

Brake system - complies with the international standards and safety requirements STB ISO 3450 and is equipped with working, parking, auxiliary and spare brake systems.

Working system:

The front wheels are dry disc wheels with automatic gap adjustment;

The rear wheels are dry single-disc with automatic gap adjustment. The disks are mounted on the shafts of traction motors.

Parking system:

Rear wheel brakes, permanently closed type. The brake drive is spring type, hydraulic control.

Assistance system:

Electrodynamic braking by traction motors in generator mode with forced cooling of braking resistors.

Spare system:

The parking and service brake circuits are used.

Braking resistors	2x600
Power dissipation, kW	1200

Body

Bucket type, with FOPS safety system, welded, with a protective canopy and heating by engine exhaust gases, equipped with a device for mechanicallocking in the raised position and stone ejectors.

Body capacity, m³: flush with the sides - 50.1; 40.0; 45.5; 55.0; 59.6; 63.4; 66.5; 103.8, stroke «heaped» 2:1 - 75.5; 67.0; 71.2; 80.0; 84.0; 86.6; 89.5; 134.8

Chassis

Welded, made of high-strength low-alloy steel. The longitudinal spars are of a box-section of variable height, connected to each other by cross members. Cast elements are used in areas of the highest loads.

Weight

The largest load weight (payload capacity) of the dump truck equipped with tires 33.00-51, kg	134000	
equipped with tires 33.00R51, kg	140000	
Dump truck weight, kg	103100-109500	
Gross weight, kg	237100-243100	
Distribution of dump truck weight along axes, %:		
unloaded	loaded	
front	50.9	33.0
rear	49.1	67.0

Refilling tanks

Fuel tank	1900
Engine cooling system	430
Enginelubrication system	168
Hydraulic system	510
Motor-wheel gearboxes	80(40x2)
Suspension cylinders:	
front	63,2 (31,6x2)
rear	58,2 (29,1x2)

Tyres

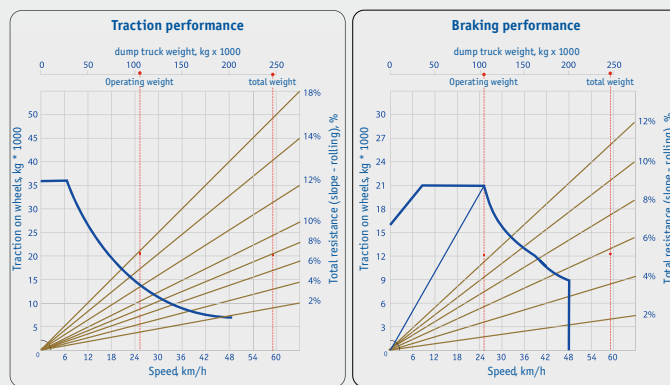
Pneumatic, tubeless, tread pattern - quarry.

Designation	33.00R51; 33.00-51
Inner pressure, Mpa	according to the manufacturer's recommendation
Rim model	24.00-51/5.0

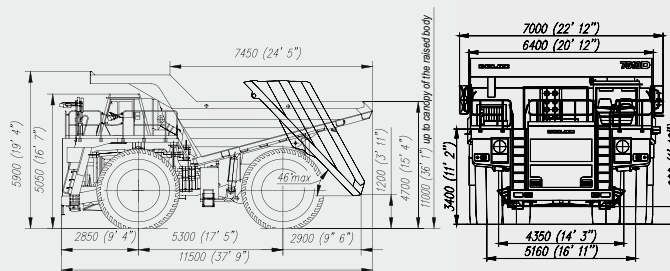
Usage

Designed for transportation of rock mass in difficult mining conditions of deep quarries, in open-pit mining of mineral deposits along technological roads in various climatic operating conditions (at ambient temperatures from -50 °C to +50 °C).

Traction and braking specification



Dimensions, mm



Overall dimensions are indicated for the basic configuration of the dump trucks. Due to continuous improvements in technology, the specifications may be changed without notice.

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