Mine dump truck BELAZ-75312
of payload capacity 240 tonnes (265 short tons)

It's designed for transportation of rock mass in difficult mining and technical conditions of deep mines, at mineral deposit open pits on technological roads under various climatic operating conditions (at ambient temperature from -50 to +50 °C).

**Engine**

Model
MTU DD 16V4000

Diesel, four-cycle engine with V-type cylinders arrangement, electric control system, direct fuel injection, gas turbine charging and intermediate cooling of the charged air. The engine complies with toxic substances emission requirements of Tier1.

- Total power @ 1900 rpm, kW (hp)
  - 1864 (2500)
- Maximum torque @ 1500 rpm, N.m
  - 10150
- Number of cylinders
  - 16
- Cylinders displacement, l
  - 65
- Cylinder diameter, mm
  - 165
- Piston stroke, mm
  - 190
- Specific fuel consumption, g/kW hr
  - 338

Air cleaning is performed by three-stage filter with dry-type elements. Exhaust gases evacuation is being made through mufflers. Lubrication system is of forced circulation type under pressure with "wet" crankcase design. Cooling system is of double-circuit fluid type with forced circulation. Oil cooling - through water-to-oil heat exchanger. Starting preheating system is of fluid type. Starting system features pneumatic starter. Cooling system impeller drive - hydraulic clutch with automatic control. Switching on and off is carried out by thermostat.

- Starting system air pressure, MPa
  - 0.6-0.8
- Electric system voltage, V
  - 24

**Suspension**

Conventional suspension for front axle and driving axle comprises trailing arms with central hinges and transversal rods. 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

**Steering**

Hydrostatic.
Steerable front wheels.

- Steerable wheels rotation angle, degrees
  - 39
- Turning radius, m
  - 15
- Overall turning diameter, m
  - 34

Meets the requirements of ISO 5010.

**Brakes**

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

Service brake:
Front wheels - disk brake with four gears per disk.
Rear wheels - disk brake with two gears per disk and automatic clearance adjustment. The disks are mounted on the shafts of traction electric motors.

Separate hydraulic drive for front and rear wheels. Parking brake - two constantly closed brake gears of rear wheels per disk. Spring actuation, hydraulic control.

Auxiliary brake - electrodynamic braking with traction electric motors with forced air cooling of brake resistors.

Emergency brake - parking brake and intact circuit of service brake are used.

- Brake resistors
  - YBST 2x600 – 2 pcs
- Power, kW
  - 2400

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AC/AC electric drive KT3-240 by Electrosila Company with traction alternator, two traction electric motors, control cabinet and dynamic braking module, adjustment and control devices. Double-row motor-wheel reduction gear is of planetary type.

- Ratio
  - 28.38
- Max traveling speed, km/h
  - 64
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 capacity, m³:
- struck: 102.4
- heaped: 141.1

Hydraulic drive

Combined hydraulic system for body hoist, steering and brake drive.
Oil pump: double-section axial-piston and variable-flow type.
Body hoist cylinders are telescopic with three stages and one stage of double action.

- Body raising time, s: 22
- Body lowering time, s: 33
- Max pressure in hydraulic system, MPa: 18
- Max pump delivery @ 1900 rpm, dm³/min: 698
- Filtering degree, mcm: 10

Capacities, l

- Fuel tank: 2900
- Engine cooling system: 600
- Engine lubrication system: 265
- Hydraulic system: 790
- Motor-wheel reduction gears: 230 (115x2)
- Suspension cylinders:
  - front: 97,4 (48,7x2)
  - rear: 103,4 (51,5x2)

Weight

- Maximum payload capacity, kg: 240000
- Unladen weight, kg: 161500
- Gross weight, kg: 401500
- Weight distribution on axles, %:
  - front: 45
  - rear: 55

Tires

Radial pneumatic tubeless tires with quarry tread pattern.

- Designation: 40.00R57, 66/90R57
- Internal pressure, MPa: 0.75, 0.7
- Rim designation: 32.00-57/6.0

Special equipment

Fire-fighting system (standard)
Starting preheater (standard)
Air conditioner (standard)
Automatic lubrication system (option)
Fuel and loading control system (option)
Telemetering tire inflation control system (option)
High-voltage line proximity alarm (option)
Fettling of the bottom body (option)

Overall dimensions, mm*

Propulsion and Retarding

*Overall dimensions are specified for dump truck with standard options