**Mining dump truck BELAZ-75320**

with payload capacity of 290 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).

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### Engine

**Model:** CUMMINS QSX 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 Tier 2.
- Rated power @ 1900 rpm, kW (hp) 2125 (2850)
- Maximum torque @ 1500 rpm, N*m 11215
- 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 210
- Air cleaning is performed by three-stage filter with dry-type elements.
- Exhaust gases evacuation is being made through body structure and mufflers.
- 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 electric starter.
- Electric system voltage, V 24

### Suspension

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 170

### Steering

- Hydrostatic
- Steerable front wheels.
- Steerable wheels rotation angle, degrees 39
- Turning radius, m 16
- Overall turning diameter, m 35
- 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 31
- Body lowering time, s 20
- Max pressure in hydraulic system, MPa 19
- Max delivery of pumps @ 1900 rpm, dm³/min 698

### 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 39.6

<table>
<thead>
<tr>
<th>Component</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traction alternator</td>
<td>5GTA41B</td>
</tr>
<tr>
<td>Traction electric motor</td>
<td>5GEB34</td>
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</tbody>
</table>

### 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 424-1 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, m³:
- struck: 123.8
- heaped 2:1: 170.6

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**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.

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**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** 17EM157
- Power dissipation, kW 4027

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**Refill capacities, l**

- Fuel tank 4360
- Engine cooling system 635
- Engine lubrication system 260
- Hydraulic system 1000
- Motor-wheel reduction gear units 210 (105x2)
- Suspension cylinders:
  - front 96.6 (48.3x2)
  - rear 127.6 (63.8x2)

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**Tires**

Pneumatic, tubeless, with quarry tread pattern.

- **Designation** 53/80R63
- **Internal pressure, MPa** — in accordance with tire manufacturer instructions.
  - Rim designation 36.00-63/5.0

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**Weight**

- Maximum payload capacity of the dump truck, kg 290000
- Empty weight, kg 210000
- Gross weight, kg 500000
- Weight distribution on axles, %:
  - front axle empty 45 loaded 33
  - rear axle empty 55 loaded 67

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**Special equipment**

- Combined fire-fighting system with automatic control and subsystem in the rear axle (standard)
- Engine liquid 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 (option)
- Heater and conditioner unit (standard)
- Refueling center (standard)
- Wiggins fast fueling system (standard)
- Fettling of the bottom body (option)

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**Overall dimensions, mm**

Overall dimensions are stated for the standard set of equipment.

Due to the continuous improvement of the product, the specification is subject to change without prior notice.