Mine dump truck BELAZ-75139 of payload capacity 130-136 tonnes

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

<table>
<thead>
<tr>
<th>Model</th>
<th>CUMMINS KTA 50-C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diesel four-cycle engine with V-type cylinders arrangement, electronic control system, direct fuel injection, gas-turbine charging and intercooling of charging air.</td>
<td></td>
</tr>
<tr>
<td>Rated power @ 2100 rpm, kW (hp)</td>
<td>1194 (1600)</td>
</tr>
<tr>
<td>Maximum torque @ 1500 rpm, N·m</td>
<td>6292</td>
</tr>
<tr>
<td>Number of cylinders</td>
<td>16</td>
</tr>
<tr>
<td>Cylinders displacement, l</td>
<td>50.3</td>
</tr>
<tr>
<td>Cylinder diameter, mm</td>
<td>159</td>
</tr>
<tr>
<td>Piston stroke, mm</td>
<td>190</td>
</tr>
<tr>
<td>Specific fuel consumption at rated power, g/kW hr</td>
<td>20.7</td>
</tr>
<tr>
<td>Air cleaning is performed by three-stage filters with dry-type elements. Engine exhaust expulsion is performed through dump truck body. The engine is equipped with pressurized circulating lubrication system with &quot;wet&quot; crankcase sump, single-loop fluid cooling system with forced circulation and fluid preheating system. Starting system is actuated by pneumatic starter. Electric equipment system voltage, V</td>
<td>24</td>
</tr>
</tbody>
</table>

### Transmission

Transmission is equipped with alternating current - alternating current drive KTE-136 with traction alternator, two traction motors, motorized wheels double-row planetary reduction units with spur gears, adjustment units, microprocessor-based control system and control devices.

| Transmission ratio | 30.36 |
| Maximum dump truck travel speed, km/h | 48 |

| Traction alternator | GST-800 |
| Traction motor | TAD-5 |

### Steering

Hydrostatic steering with steerable front wheels.

| Steering angle, degree | 42 |
| Overall turning diameter, m | 28 |
| The steering meets ISO 5010 requirements. |

### Brakes

Dump truck brake system meets ISO 3450 international safety requirements and is equipped with service, parking, auxiliary and emergency brake systems.

**Service brake system** consists of disk brakes with two brake gears per disk for front wheels and disk brakes with two brake gears per disk and automatic gap adjustment for rear wheels. The disks are mounted on traction motor shafts.

**Parking brake system** is permanently closed system with one rear wheels brake gear per disk, spring actuator and hydraulic control.

**Auxiliary brake system** is electrodynamic braking by traction motors with forced air cooling of brake resistors (UVTR 2x600, power 1200 kW).

**Emergency brake system** uses parking brake and operable circuit of wheel brakes.

### Hydraulic system

Hydraulic system is combined for body dumping gear, steering and braking system actuator and equipped with variable-displacement axial-piston oil pump and three-stage telescopic body lifting cylinders with one stage of double action.

| Body lifting time, s | 20 |
| Body lowering time, s | 18 |
| Maximum pressure in hydraulic system, MPa | 18 |
| Maximum pump delivery @ 1900 rpm, dm³/min | 474 |
| Filtration degree, mc㎡ | 10 |

### Suspension

Suspension is conventional for front axle and driving axle and equipped with trailing arms, central joints and transversal rods. Cylinders are pneumohydraulic (nitrogen and oil) and equipped with inbuilt hydraulic shock absorber. Two cylinders are on the front axle and two cylinders are on the rear axle.

| Cylinder piston stroke, mm | 320 |
| - front | 320 |
| - rear | 290 |
Welded bucket-type body with engine exhaust heating is equipped with FOPS safety system, protective canopy, device for mechanical fixing in raised position and rock-ejectors.

Body capacity, m³:

- struck: 45.5, 50.1
- heaped: 2:1
  - 71.2, 75.5

High-strength low-alloy steel welded frame with application of cast elements at the maximum loading points is equipped with box-section variable-height side-members interconnected by cross-members.

### Tires

- Tubeless air tires with quarry tread pattern.
- Tire designation: 33.00-51/33.00R51
- Inflation pressure, MPa: 0.62; 0.7
- Rim designation: 24.00-51/5.0

### Cab

- Two-man two-door cab is equipped with air-sprung adjustable driver seat, additional trainee seat and adjustable steering column.
- The cab meets EN 474-1 and EN 474-6 requirements that specify permissible levels of in-cab noise, vibration, content of hazardous substances and dust. Driver’s workplace meets ROPS safety requirements.
- In-cab noise level is not more than 80 dB(A).
- Local vibration level is not more than 126 dB(A).
- Overall vibration level is not more than 115 dB(A).

### Special equipment

- Fire-fighting system (standard)
- Heating and conditioning unit (standard)
- Automatic lubrication system (optional)
- System of loading and fuel control (optional)
- Telemetering tire-pressure monitoring system (optional)
- Air purification system (optional)
- Body floor lining (optional)

### Weight

- Maximum payload capacity of the dump truck equipped with:
  - diagonal tires 33.00-51, kg: 130000
  - radial tires 33.00R51, kg: 136000
  - Unladen weight, kg: 108500
- Gross weight of the dump truck equipped with:
  - diagonal tires 33.00-51, kg: 238500
  - radial tires 33.00R51, kg: 244500
- Rear truck weight distribution on axles, %:
  - laden: 50.9
  - front: 33.0
  - rear: 67.0

### Refill capacities, l

- Fuel tank: 1900
- Engine cooling system: 410
- Engine lubrication system: 195
- Oil tank: 480
- Reduction units of motorized wheels: 92 (46x2)

### Towing and Braking performance

### Overall dimensions, mm*

*Overall dimensions are specified for basic kitting-up of the dump truck