Mining dump truck BELAZ-7558F with payload capacity of 90 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).

**Engine**

Model: CUMMINS QST 30-C
Diesel, four-cycle engine with V-type cylinders arrangement, direct fuel injection, gas turbine charging and intermediate cooling of the charged air.
Rated power @ 1900 rpm, kW (hp) 895 (1200)
Maximum torque @ 1400 rpm, N*m 5086
Number of cylinders 12
Cylinders displacement l 30
Cylinder diameter, mm 140
Piston stroke, mm 165
Specific fuel consumption at rated power, g/kW*hr 199
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 single-circuit fluid type with forced circulation.
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 260
- rear 210

**Steering**

Hydrostatic
Steerable front wheels.
Steerable wheels rotation angle, degrees 38
Turning radius, m 11
Overall turning diameter, m 24
Complies with ISO 5010 requirements.

**Transmission**

AC electric drive with traction alternator, two traction electric motors, motor-wheel reduction gear units, adjustment and control devices.
Max speed, km/h 64
Motor-wheel reduction gear unit ratio 30:36
Traction alternator 5GTA59A
Traction electric motor 5GEB50A

**Hydraulic system**

Combined hydraulic system for body hoist, steering and brake system.
Body hoist cylinders are telescopic with two stages and one stage of double action.
Oil pump is of axial-piston variable-flow type.
Body raising time, s 13
Body lowering time, s 11
Max pressure in hydraulic system, MPa 18
Max delivery of pumps @ 1900 rpm, dm³/min 474
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 is equipped with electronic diagnostic panel, heating and air conditioning unit, electric windshield washers and wipers. 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).
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**

Body volume, m³:
- struck: 37.7
- heaped: 53.3
- 44.5
- 60.0
- 75.0
- 93.0
- 86.5
- 103.0

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.

**Frame**

Traction and braking performance

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

**Overall dimensions, mm**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Width</th>
<th>Length</th>
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<tr>
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<td>9635 (31'7&quot;) up to tip of the raised body</td>
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**Special equipment**

- Fire-fighting system with remote control (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 proximity alarm (standard)
- Heater and conditioner unit (standard)
- Fettling of the bottom body (option)

**Tires**

- Pneumatic, tubeless, with quarry tread pattern.
- Designation: 27.00R49; 31/90-49
- Internal pressure, MPa — in accordance with tire manufacturer instructions.
- Rim designation: 19.50-49/4.0

**Refill capacities, l**

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<td>1105</td>
<td>260 (380)</td>
<td>140</td>
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<td>80 (40x2)</td>
<td>- front: 31.4 (15.7x2)</td>
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**Weight**

- Maximum payload capacity, kg: 90000
- Empty weight, kg: 74000
- Gross weight, kg: 164000
- Weight distribution on axles, %:
  - front axle: empty 50.9, loaded 33.0
  - rear axle: 49.1

- Refill capacities, l:
  - Fuel tank: 1105
  - Engine cooling system (tropical modification): 260 (380)
  - Engine lubrication system: 140
  - Hydraulic system: 510
  - Motor-wheel reduction gear units: 80 (40x2)
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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: two dry single-disk brake gears per disk with automatic clearance adjustment.
  - Rear wheels: one dry single-disk brake gear per disk with automatic clearance adjustment.

- **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:**
  - Intact circuit of service brake together with parking brake are used.

- **Brake resistors:** 17EM166
- **Power dissipation, kW:** 1195

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