

Mining dump truck BELAZ-75581

Payload capacity 90 tonnes (99 short tons)

Designed for transportation of rocks in severe 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).

NEW!



Engine

Model	CUMMINS QST30-C
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.	
Rated power	
@ 1900 rpm, kW (hp)	783 (1050)
Number of cylinders	12
Cylinders displacement, l	30
Cylinder diameter, mm	140
Piston stroke, mm	165,1
Specific fuel consumption, g/kW hr	202
Air cleaning is performed by three-stage filters with dry-type elements.	
Exhaust gases evacuation is being made through two exhaust manifolds and 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

Transmission

AC/AC electric drive with traction alternator, two traction electric motors, motor-wheel reduction gears, microprocessor control system, adjustment and control devices.

Motor-wheel reduction gear is of double-row type with spur gears.

Ratio	30,36
Max traveling speed, km/h	60

Transmission	AC/AC type
Traction alternator	GST 700-8
Traction motor	TAD-9

Steering

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

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	260
- rear	210

Hydraulic system

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

Body raising time, s	19
Body lowering time, s	19
Max pressure in hydraulic system, MPa	16,5
Max pump delivery @ 1900 rpm, dm ³ /min	464

Tires

Pneumatic tubeless tires with quarry tread pattern.

Designation	27.00R49; 31/90-49
Internal pressure, MPa	upon recommendations of tire producer
Rim designation	19.50-49/4.0

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, cub. m: struck / heaped 2:1:
37,7 / 53,3; 44,5 / 60,0; 75,0 / 93,0

Frame

Frame is a welded structure of high-strength low-alloyed steel with casting and welded elements in high load zones. Longitudinal box-section variable height side rails are interconnected by cross-members.



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 two 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.

Parking brake – one constantly closed brake gear 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.

Brake resistors – grid box 2x600 with power of 1200 kW.

Cab

Two-seat, two-door, with pneumatically cushioned adjustable operator seat, additional seat for probationer and adjustable steering column. 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. Noise level inside the cab 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)

Starting preheater (standard)

Automatic lubrication system (option)

Fuel and loading control system (option)

Wiggins speed fueling system (option)

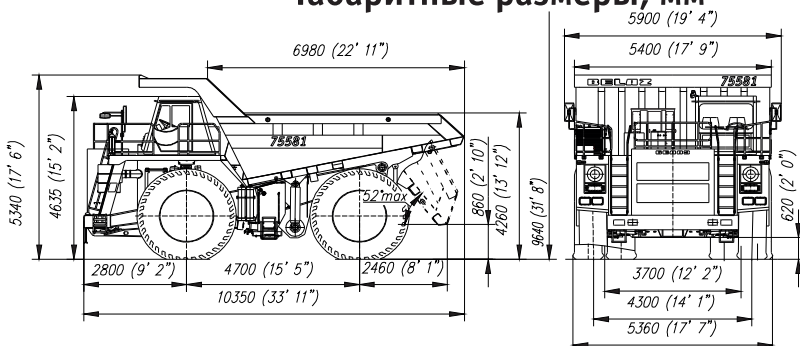
Telemetering tire inflation control system (option)

High-voltage line proximity alarm (option)

Air conditioner (option)

Fettling of the bottom body (option)

Габаритные размеры, мм*



*For standard set of equipment

Weight

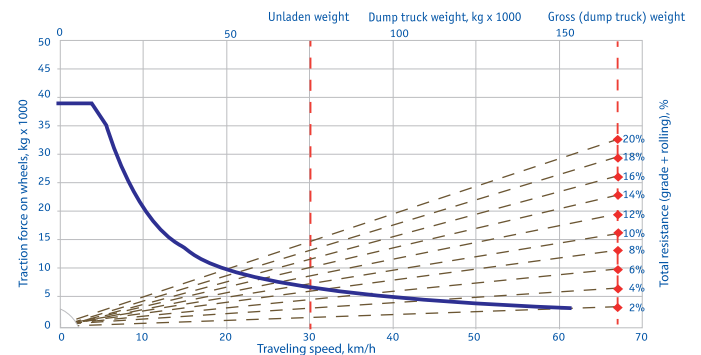
Maximum payload capacity of dump truck with:	90000
Operational weight, kg	74000
Gross weight of dump truck with	164000
Weight distribution on axles, %:	
unladen	
front	50,9
rear	49,1
loaded	
front	33,0
rear	67,0

Refill capacities, l

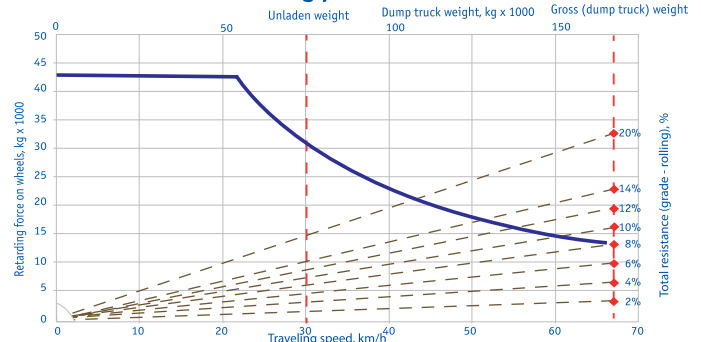
Fuel tank	1105
Engine cooling system	380
Engine lubrication system	140
Oil tank	405
Motor-wheel reduction	92 (46x2)
Suspension cylinders:	
-front	30,8 (15,4x2)
-rear	58,6 (29,3x2)

Traction and braking performance

Traction performance



Braking performance



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