Mine dump truck BELAZ-75604 of payload capacity 360 tonnes (400 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 -45 to +50 °C).

Engine

Model	MTU 20V4000

Four-cycle turbocharged and intercooled direct diesel engine with V-type cylinders arrangement and electronic control system.

Rated power @ 1800 rpm, kW	2800 (3750)
Maximum torque @ 1700 rpm, N.m	15728
Number of cylinders	20
Cylinders displacement, l	90
Cylinder diameter, mm	165
Piston stroke, mm	210
Specific fuel consumption, g/kW hr	198

Air cleaning is performed by three-stage filters with dry-type elements.
Engine exhaust expulsion is performed through body and mufflers.
Circulating lubrication system is pressurized and designed with "wet" crankcase. Fluid cooling system is double-loop with forced circulation.
Oil cooling is performed by oil-to-water heat exchanger.
Fluid preheating system. Fuel cooling is performed by radiator.
Cooling system impeller is actuated by electrohydraulic friction coupling.
Automatic control.
Electric starter starting system.

Electric equipment system voltage, V	24

Transmission

Electromechanical transmission KTE-360 produsedby OJSC "Silovyje Mashiny" AC drive with traction alternator, two traction motors, motorized wheels planetary double-row reduction units, adjustment units, control deviced.

Transmission ratio	38,05
Maximum dump truck travel speed, km/h	64

Traction alternator	GST 2450-8
Traction motor	TAD-8
Power control cabinet	SHU-360

Suspension

Suspension is conventional for front and rear wheels.
Cylinders are pneumohydraulic (nitrogen and oil), two cylinders are on the front axle and two cylinders are on the rear axle.
Cylinder piston stroke, mm

- front	300
- rear	170

Steering

Hydrostatic steering with flow amplifier and variable-displacement pump drive. Emergency drive is combined, from hydropneumatic accumulators and from electrical pump.

Incline of front wheels, degree	1
Turning radius, m	17,2
Overall turning diameter, m	38
Steering system pressure	16,5

Brakes

Brake system meets ISO 3450 international safety requirements and consists of service, parking, retarding and emergency brake systems.
Service brake system includes front wheels disk brakes with four brake gears per disk and rear wheels twin-disk brakes with one brake gear per disk and automatic gap adjustment. The disks are mounted on traction motor shafts. Hydraulic actuator is separate for front and rear wheels.
Parking brake system is rear wheels permanently closed brake gears on the outside brake disk of traction motor. Spring actuator and hydraulic control.
Retarding brake system is electrodynamic braking by traction motors in alternator mode with forced air cooling of brake resistors.
Emergency brake system uses parking brake, operable circuit of service brake system and retarder.

Brake resistors	TR3400KW
Power, kW	3400

Body

Welded bucket-type body with FOPS safety system, protective canopy, engine exhaust heating, device for mechanical fixing in raised position, rock-ejectors.
Body capacity, m^3:

struck	heaped 2:1
162,8	218,1
139	199

Frame

Frame is welded of high-strength low-alloy steel with application of cast elements at the maximum loading points. Box-section variable-height side-members are interconnected by cross-members.

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Hydraulic system

Hydraulic system is combined for body dumping gear, steering and brake system. Actuator is mechanical, through propeller shaft from traction alternator outlet flange.
Oil pumps are two-section variable-displacement axial-piston pumps with Bosch-Rexrot pressure governor. Body lifting cylinders are two-stage telescopic cylinders with one stage of double action.

Loaded body lifting time, s	31
Body lowering time, s	20
Pressure in hydraulic system, MPa	21

Cab

Two-man cab with adjustable driver seat, ROPS safety system.
The cab meets requirements of standards that specify levels of in-cab noise, vibration, content of hazardous substances and dust.
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).

Refill capacities, l

Fuel tank	4375
Engine cooling system	890
Engine lubrication system	300
Hydraulic system	1410
Reduction units of motorized wheels	300(150x2)
Suspension cylinders:	
- front	129,0(64,5x2)
- rear	125,8 (62,9x2)

Tires

Radial tubeless air tires with quarry tread pattern.

Tire designation	59/80R63
Inflation pressure, MPa	0,6
Rim designation	44.00-63/5.0

Weight

Payload capacity, kg	360000
Operating weight, kg	261000
Gross weight, kg	621000

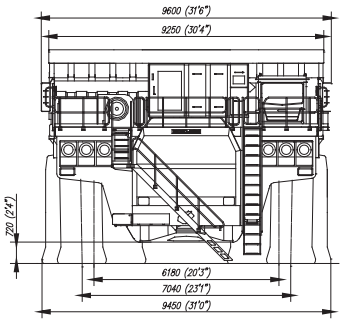
Dump truck weight distribution on axles, %:

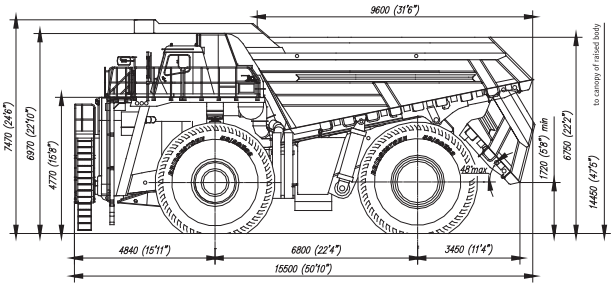
	unloaded	loaded
- front	49	33
- rear	51	67

Special equipment

Automatic fire-fighting system (standard)
Starting preheater (standard)
Heating and conditioning unit (standard)
Automatic lubrication system (standard)
Loading and fuel control system (standard)
Telemetering tire-pressure monitoring system (standard)
High-voltage line approach warning device (standard)
Side and rear vision video system (standard)
Body floor lining (standard)
Diagnostic system (standard)
Rock deflectors (standard)
Rock ejectors (standard)
Diagonal staircase with folding unit v(standard)
Rigging points for service purposes (standard)
Exhaust gases evacuation through mufflers (optional)
Quick refill system “Wiggins” (optional)

Overall dimensions, mm*

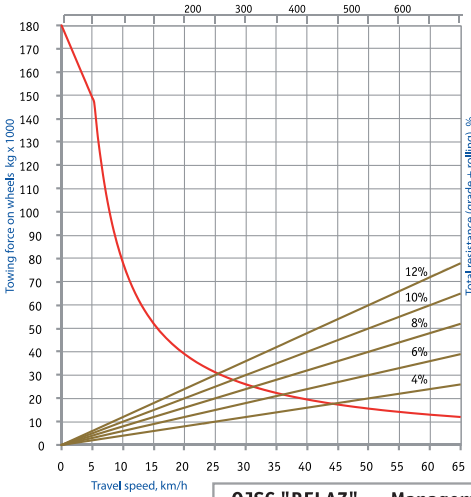




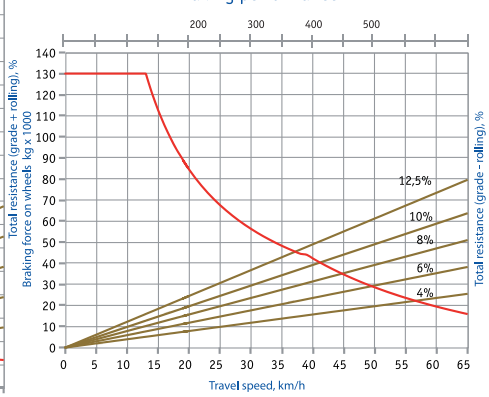
*Overall dimensions are specified for basic kitting-up of the dump truck

Towing and braking performance

Towing performance



Braking performance



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