



Mine dump truck BELAZ-75174 of payload capacity 160 tonnes (176 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 -50 to +50 °C).



Engine

Model MTU DD 12V4000
Four-cycle turbocharged and intercooled direct diesel engine with V-type cylinders arrangement and electronic control system. The engine meets Tier1 toxic substances emission requirements.
Rated power @ 1900 rpm, kW (hp) 1400(1875)
Maximum torque @ 1500 rpm, N.m 7610
Number of cylinders 12
Cylinders displacement, l 48,8
Cylinder diameter, mm 165
Piston stroke, mm 190
Specific fuel consumption at rated power, g/kW hr 201
Air cleaning is performed by three-stage filter with dry-type elements.
Engine exhaust expulsion is performed through body.
Circulating lubrication system is pressurized and designed with "wet" crankcase. Single-loop fluid cooling system with forced circulation.
Fluid preheating system.
Pneumatic starter starting system.
Electric equipment system voltage, V 24

Electric drive

AC-AC KTE-160 drive with traction alternator, two traction motors, motorized wheels differential-type double-row planetary reduction units, adjustment units and control devices.
Transmission ratio 30,54
Maximum dump truck travel speed, km/h 64

Transmission	AC -AC
Traction alternator	SGT 1600-8
Traction motor	TAD-5

Suspension

Suspension is conventional for front and driving axles and equipped with trailing arms, central joints and transverse rods.
Cylinders are pneumohydraulic (nitrogen and oil) with inbuilt hydraulic shock absorber. Two cylinders are on the front axle and two cylinders are on the rear axle.
Cylinder piston stroke, mm
- front 220
- rear 170

Steering

Hydrostatic steering with steerable front wheels.
Steering angle, degree 42
Turning radius, m 14
Overall turning diameter, m 29
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 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.
Emergency brake system uses parking brake and operable circuit of wheel brakes.
Brake resistors Gridbox 2x600 - 2 units
Power, kW 2400

Hydraulic drive

Hydraulic system is combined for body dumping gear, steering and brakes actuator. The system is equipped with two-section variable-displacement axial-piston oil pump and two-stage telescopic body lifting cylinders with one stage of double action.
Body lifting time, s 20
Body lowering time, s 22
Maximum pressure in hydraulic system, MPa 18
Maximum pump delivery @ 1900 rpm, dm³/min 698
Filtration degree, mcm 10

Body

Welded bucket-type body with FOPS safety system, rops, engine exhaust heating, device for mechanical fixing in raised position and rock-ejectors.
 Body capacity, m³:
 struck heaped 2:1
 65,6 96,5

Frame

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



Tires

Tubeless air tires with quarry tread pattern.
 Tire designation 36.00R51
 Rim designation 26.00-51/5.0

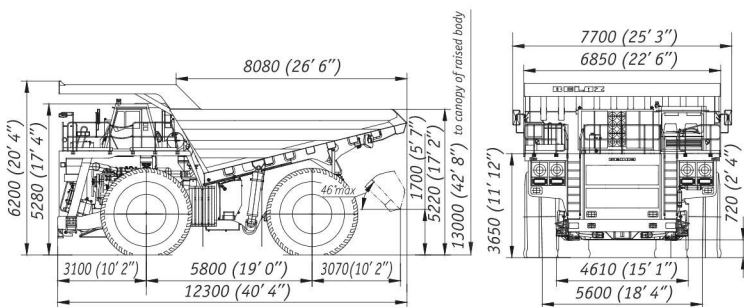
Cab

Two-man two-door cab with air-sprung adjustable driver seat, additional trainee seat and adjustable steering column. The cab meets requirements of EN 474-1 and EN 474-6 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
- Starting preheater
- Heating and conditioning unit
- Automatic lubrication system
- Loading control system
- Telemetering tire-pressure monitoring system
- Body floor lining

Overall dimensions, mm*



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

Weight

Maximum payload capacity, kg	16000
Unladen weight, kg	134000
Gross weight, kg	294000
Dump truck weight distribution on axles, %:	
unladen	
front	50,9
rear	49,1
laden	
front	33,0
rear	67,0

Capacities, l

Fuel tank	2300
Engine cooling system	465
Engine lubrication system	218
Oil tank	670
Reduction units of motorized wheels	180 (90x2)
Suspension cylinders:	
- front	33 (16,5x2)
- rear	56 (28x2)

Propulsion and Retarding

