

BELAZ-7555A mining dump truck with payload capacity of 55 tonnes

It's designed for transportation of rock in difficult mining conditions of deep mines, in open pit mining of mineral deposits on roads under various climatic operating conditions (at ambient temperature from -50 to +50 °C).



Rated power @ 2100 rpm, kW (hp)	537 (730)
Maximum torque @ 1400 rpm, N*m	2744
Number of cylinders	12
Cylinders displacement, l	25.86
Cylinder diameter, mm	140
Piston stroke, mm	140
Specific fuel consumption at rated power, g/kW*hr	216
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 combined type with "wet" crankcase design.	
Oil cooling – through water-to-oil heat exchanger.	
Cooling system is of fluid type with forced circulation, combined with hydromechanical transmission cooling system and multiple-disk oil-cooled brakes.	
Starting system features electric starter.	
Electric system voltage, V	24

Transmission

Hydromechanical transmission with complex one-stage locking torque converter, single-shaft gearbox with friction clutches, automatic and command control system.

Max speed, km/h	55	
Gearbox ratios:		
gear	forward	reverse
1	4.07	4.53
2	2.86	
3	2.04	
4	1.43	
5	1.01	
6	0.72	

Engine

Conventional suspension for front axle and driving axle comprises trailing arms with central hinges and transversal rods. Cylinders are pneumohydraulic (nitrogen and oil), two cylinders both on the front axle and on the rear axle.

Cylinder piston stroke, mm	
- front	300
- rear	270

Suspension

Steering

Complies with ISO 5010 requirements.

Steerable wheels rotation angle, degrees	41
Turning radius, m	9
Overall turning diameter, m	20.5

Braking system

The braking system complies with international safety requirements according to ISO 3450 and comprises service, parking, auxiliary and emergency brakes.

Service brake: multiple-disk oil-cooled brakes for rear wheels, dry single-disk brakes for front brakes.

Separate hydraulic drive for front and rear wheels.

Parking brake: disk-type parking brake on the shaft of final drive. Spring actuation, hydraulic control.

Auxiliary brake: multiple-disk oil-cooled brakes of rear wheels are used. Retardation is performed by service brakes (separate floor pedal with hydraulic drive).

Emergency brake: parking brake and intact circuit of service brake are used.

Hydraulic system

Combined hydraulic system for body hoist, steering and brake system.

Oil pumps are of gear type.

Body hoist cylinders are telescopic with two stages and one stage of double action.

Body raising time, s	11
Body lowering time, s	14
Max pressure in hydraulic system, MPa	17
Max delivery of pumps @ 2100 rpm, dm ³ /min	370
Filtering degree, μm	10

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 volume, m ³ :	
struck	heaped 2:1
22.7	32.3
22.3	35.3
28.0	37.3
34.6	46.1

BELAZ 7555A



Frame

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.

Driving axle

Mechanical, with single-reduction final drive with skew bevel gears, a differential with straight bevel gears and four satellites, planetary wheel drives with cylindrical spur gears.

Ratios:	
final drive	2.733
hub drive	7.615
driving axle total	20.815

Drive line

Two open-type cardan shafts with joints on needle bearings connect hydromechanical transmission with engine and driving axle. Flexible coupling is mounted between the front propeller shaft and engine. The front propeller shaft is protected by safety guard.

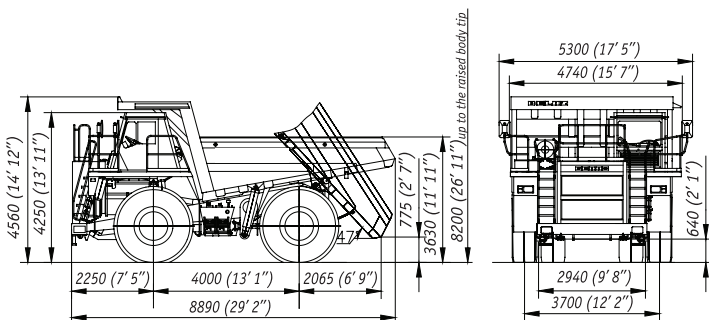
Cab

Two-seat, two-door, with an additional seat for the passenger and pneumatically cushioned adjustable operator's seat. 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).

Tires

Pneumatic, tubeless, with quarry tread pattern.
 Designation 24.00-35 HC 42; 24.00R35
 Internal pressure, MPa—in accordance with tire manufacturer instructions.
 Rim designation 17.00-35/3.5

Overall dimensions, mm



Weight

Maximum payload capacity, kg	55000
Empty weight, kg	42000
Gross weight, kg	97000
Weight distribution on axles, %:	
front axle	empty 51.0 loaded 33.0
rear axle	empty 49.0 loaded 67.0

Refill capacities, l

Fuel tank	740
Engine cooling system	205
Engine lubrication system	65
Hydromechanical transmission	146
Hydraulic system	300
Final drive	108
Suspension cylinders:	
front	15.6 (7.8x2)
rear	32.4 (16.2x2)

Special equipment

- Fire-fighting system with remote control (standard)
- Engineliquid 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 line proximity alarm (standard)
- Heater and conditioner unit (standard)
- Auxiliary cab heater (standard)

Traction and braking performance

