

# BELAZ

## MINING DUMP TRUCK

# BELAZ-7547

42-45 TONS



[www.belaz.by](http://www.belaz.by)

## SPECIFICATIONS

### Engine

Rated power at 2100 rpm, kW (hp)	368 (500)
Maximum torque at 1600 rpm, N*m	1815
Number of cylinders	12
Cylinder displacement, l	22,3
Cylinder diameter, mm	130
Piston stroke, mm	140
Specific fuel consumption at rated power, g/kW*h	224
Air purification - three-stage with dry type filter elements. Exhaust gases are released through the body. The lubrication system is mixed, based on the «wet» sump principle. Oil cooling is by oil radiator. The cooling system is liquid, with forced circulation. The starting system is electric starter.	
Voltage in the electrical system, V.	24

### Steering

Meets the requirements of the ISO 5010 standard.	
Turning radius, m	10,2
Overall turning diameter, m	23

### Transmission

Hydromechanical transmission with a three-shaft matching gearbox, a complex single-stage lockable torque converter, a shaft gearbox with friction clutches, a hydrodynamic retarder, and electrohydraulic gear shift control.			
Maximum dump truck speed, km/h			50
Gear ratios:			
matching gearbox			
1.0			
gear	forward	reverse	
1	3,84	6,07	
2	2,27	1,67	
3	1,50		
4	1,05		
5	0,62		

### Suspension

Dependent for the front axle and drive axle with longitudinal and transverse rods. Pneumohydraulic cylinders (oil and nitrogen) with a built-in hydraulic shock absorber, two per front axle and four rear axle.	
cylinder piston stroke, mm:	
- front	265
- rear	265

## Hydraulic system

Combined for body lifting mechanism and steering.  
Oil pumps are gear-type.  
The bodylift cylinders are telescopic, three-stage with one double-acting stage.  
Bodylifting time, s 16  
Bodylowering time, s 20  
Maximum pressure in the hydraulic system, MPa 13,5  
Maximum pump performance at 2100 rpm, dm<sup>3</sup>/min 270  
Degree of filtration, microns 10

## Cabin

Single, with an additional side seat, the driver's seat is air-sprung, adjustable. Meets the requirements of standards (EN 474-1 and EN 474-6) establishing levels of internal noise, vibration, concentration of harmful substances and air dust. Sound level in the cabin no more than 80 dB(A).

## Brake system

Brake system - complies with international standards and safety requirements ISO 3450 and is equipped with working, parking, auxiliary and spare brake systems.  
*Working system:* brake mechanisms - shoe, drum type for front and rear wheels. Drive - pneumatic, separate for the front wheels.  
*Parking system:* shoe brake mechanism, permanently closed type on the drive shaft of the main gear. Drive - spring, pneumatic control.  
*Auxiliary system:* hydrodynamic brake-retarder, on the drive shaft of the gearbox, control - electrical.  
*Backup system:* The parking and service brake circuits are used.

## Cardan gear

Two open-type cardan shafts with hinges on needle bearings connecting the hydromechanical transmission to the engine and drive axle. An elastic coupling is installed between the front driveshaft and the engine.

## Body

Bucket type, with a FOPS and ROPS safety system, welded, with a protective visor and heating with engine exhaust gases, equipped with a device for mechanical locking in the raised position, stone chippers and stone ejectors.  
Body capacity, m<sup>3</sup>:  
flush with the sides - 21,5; 27,4; 28,5; 35,9  
stroke «heaped» 2:1 - 27,6; 31,7; 33,9; 43,3

## Chassis

Welded, made of high-strength low-alloy steel. The longitudinal spars are box-shaped, of variable height, connected to each other by cross members.

## Weight

Maximum cargo weight (carrying capacity), kg	42000-45000
Dump truck weight without load, kg	33100
Total weight, kg	75100-78100
Distribution of dump truck weight along axes, %:	
without load	with load
front 45,0	33,0
rear 55,0	67,0

## Tires

Pneumatic, tread pattern - quarry.  
Designation 21.00-33; 21.00R35; 21.00-35 HC 36 (E-4)  
Internal pressure, MPa as recommended by the tire manufacturer  
Rim designation 15.00-35/3.0

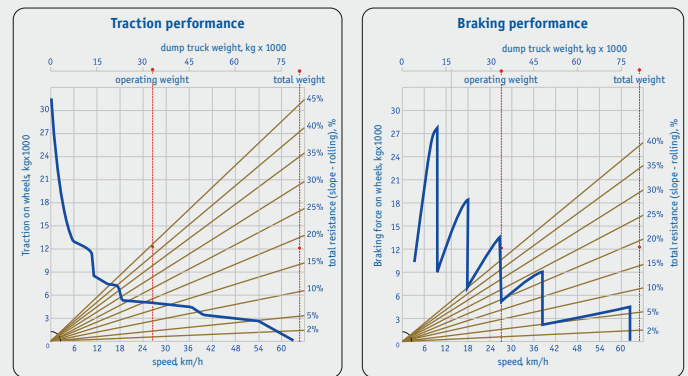
## Refill tanks

Fuel tank, l	610
Engine cooling system, l	130
Engine lubrication system, l	54
Hydromechanical transmission	70
Hydraulic system	160
Main gear	32
Wheel gears	32 (16x2)
Suspension cylinders:	
front	9,6 (4,8x2)
rear	19,2 (4,8x2)

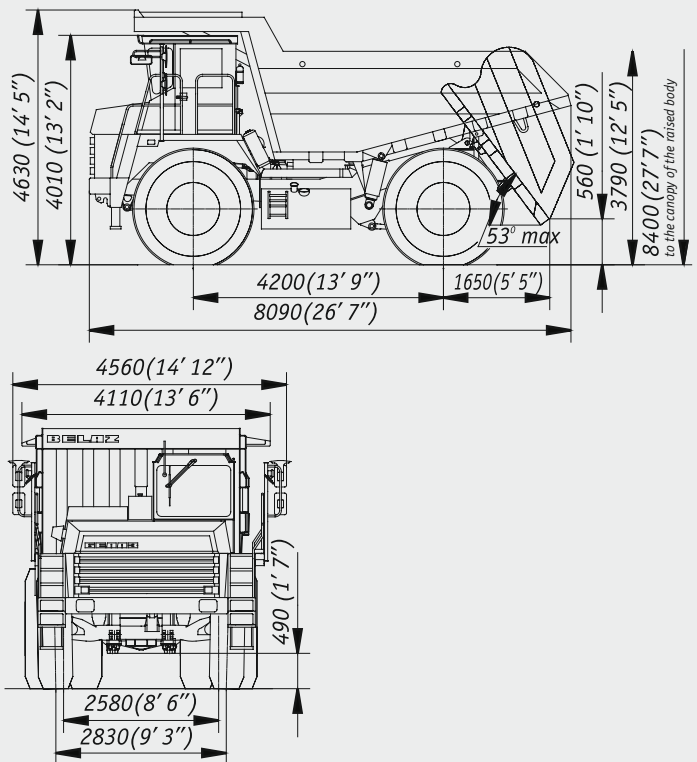
## Application

Designed for transportation of rock mass in difficult mining conditions of deep quarries, in open-pit mining of mineral deposits along technological roads in various climatic operating conditions (at ambient temperatures from -50 °C to +50 °C).

## Traction and braking characteristics



## Dimensions, mm



Overall dimensions are indicated for the basic configuration. Due to continuous improvements in technology, specifications provided are subject to change without notice.

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