

# Mine dump truck BELAZ-75602 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).



<b>Engine</b>	
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
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

<b>Electric drive</b>	
Electromechanical transmission with Siemens MMT400 AC drive with traction alternator, two traction motors, motorized wheels planetary double-row reduction units, adjustment units, control devices.	
Transmission ratio	38,05
Maximum dump truck travel speed, km/h	64

Traction alternator	YJ177B
Traction motor	1TB3030-2GA03
Power control cabinet	MMT 400 Drive System

<b>Suspension</b>	
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

<b>Steering</b>	
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

<b>Brakes</b>	
Brake system meets ISO 3450 international safety requirements and consists of service, parking, retarding and emergency brake systems.	
<b>Service brake system</b> 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.	
<b>Parking brake system</b> is rear wheels permanently closed brake gears on the outside brake disk of traction motor. Spring actuator and hydraulic control.	
<b>Retarding brake system</b> is electrodynamic braking by traction motors in alternator mode with forced air cooling of brake resistors.	
<b>Emergency brake system</b> uses parking brake, operable circuit of service brake system and retarder.	
Brake resistors	MMT400 Gridbox
Power, kW	4700

