

BELAZ SERIES 7513

USA and CANADA

136mt/ 150t payload capacity



Engine

Model CUMMINS QSK 45C
Four-cycle gas-turbocharged and intercooled direct injection diesel engine with V-type cylinders and electronic control system.
Meets Tier 2 emission requirements.

	Metric	SAE
Rated power @ 1900 rpm, kW/ hp	1193	1600
Maximum torque @ 1500 rpm, N.m/ ft lbs	6836	5041
Number of cylinders	12	12
Cylinders displacement, l/ cu in	45	2746

Air cleaning is performed by three-stage filter with dry-type elements.
Engine exhaust routed through body.
Circulating lubrication system is pressurized and designed with wet sump. Single-loop fluid cooling system with forced circulation.
Fluid preheating system.
Pneumatic starter.
Electric equipment system voltage, V 24

Electric Drive

Drive options are AC/DC and AC/AC. Planetary double row gear reduction with AC/DC and Electrosila, single row gear reduction with GE.
Transmission ratio 30.36:1
Maximum dump truck travel speed, km/h/ mph 48-64/ 30-40

Traction alternator	Belaz AC	GE AC	Electrosila AC
Traction motor	Belaz DC	GE AC	Electrosila AC
Reduction gear	Belaz	GE	Belaz

Suspension

Suspension is conventional for front and drive axle, equipped with trailing arms, central joints and transverse rods. Cylinders are pneumohydraulic (nitrogen and oil) and equipped with built in hydraulic shock absorber. Two cylinders are on the front axle and two cylinders are on the rear axle.
Cylinder piston stroke

	Metric, mm	SAE, in
- front	320	13
- rear	290	11

Steering

Hydrostatic steering with steerable front wheels.

	Metric, m	SAE, ft
Steering angle, degree	42	42
Turning radius	13	43
Overall turning diameter	28	92

The steering meets ISO 5010 requirements.

Brakes

Dump truck brake system meets ISO 3450 international safety regulations and requirements. The system is equipped with service, parking, retarding and emergency brake systems.

Service brake system

Front wheel brakes- disc type with two brake calipers per one disc.
Rear wheel brakes- disc type with one brake caliper per each disc and automatic slack adjustment. Discs are installed on the traction electric motor shafts.

Brake drive- hydraulic, separate for the front and rear wheels.

Parking brake system- with one brake unit per side, normally closed.

Brake actuation- by spring.

Brake control- hydraulic.

Retarder system- retarding by traction electric motors in generator mode with forced air cooled resistors.
(UVTR 2x600, power 1200kW).

Emergency brake system- parking brake system combined with operating wheel brake circuit.

Hydraulic Drive

Hydraulic system is combined for body dumping gear, steering and brakes actuator. The system is equipped with variable-displacement axial-piston oil pump and three-stage telescopic body lifting cylinders with one stage of double action.

Body lifting time, sec	20
Body lowering time, sec	18
Maximum pressure in hydraulic system, MPa	18
Maximum pump delivery @ 1900 rpm, dm ³ /min/ gal/min	474/ 25
Filtration degree, mcm	10

Body

Welded bucket-type body with FOPS safety system, protective canopy, engine exhaust heating, device for mechanical fixing in raised position, and rock-ejectors.

Body capacity:

struck		heaped 2:1	
Metric, m ³	SAE, yd ³	Metric, m ³	SAE, yd ³
45.5	60	71.2	93
50.1	66	75.5	99
55.0	72	80.0	105
59.6	78	84.0	110
63.4	83	86.6	113
103.8	136	134.8	176

Frame

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



Tires

Tubeless air tires with quarry tread pattern.

Tire designation	33.00-51; 33.00R51
Inflation pressure, MPa/ psi	0.6/ 90
Rim designation	24.00-51/5.0

Cab

Two-man two-door cab is equipped with air suspension adjustable driver seat, additional trainee seat and adjustable steering column. The cab meets EN 474-1 and EN 474-6 requirements for levels of in-cab noise, vibration, and dust.

Cab meets ROPS safety requirements.

In-cab noise level is not more than 80 dB(A).

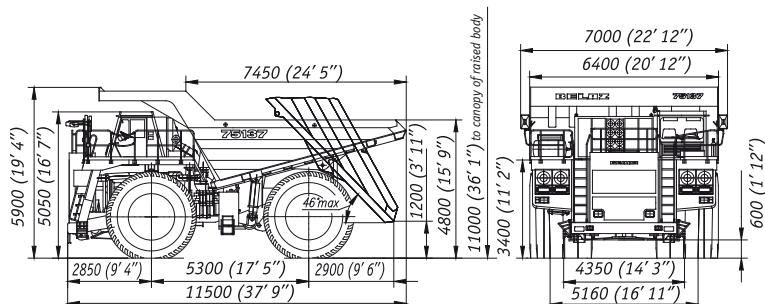
Local vibration level is not more than 126 dB(A).

Overall vibration level is not more than 115 dB(A).

Special equipment

- Fire-fighting system (standard)
- Heating and ventilation system (standard)
- Starting preheater (standard)
- Automatic lubrication system (optional)
- Loading and fuel control system (optional)
- Telemetering tire-pressure monitoring system (optional)
- Fast fueling system Wiggins (optional)
- Warning device for high-voltage line (optional)
- Body floor lining (optional)
- Rock-fenders of front and rear wheels (optional)
- Diagonal stairs (optional)
- Exhaust routed undertruck (optional)

Overall dimensions, mm*



*Overall dimensions are specified for truck with standard options

Weight

Maximum payload capacity of the dump truck equipped with:

	Metric, kg	SAE, lbs
- diagonal tires 33.00-51	130000	286601
- radial tires 33.00R51	136000	299829
Unladen weight	108100	238320

Gross weight of the dump truck equipped with:

- diagonal tires 33.00-51	238100	524927
- radial tires 33.00R51	244100	538148

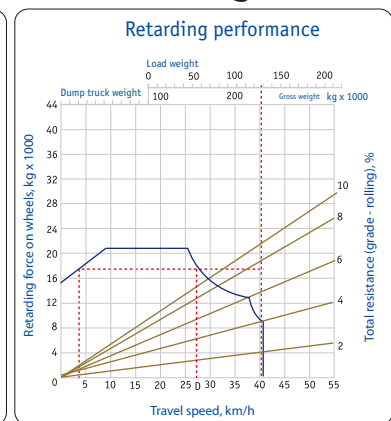
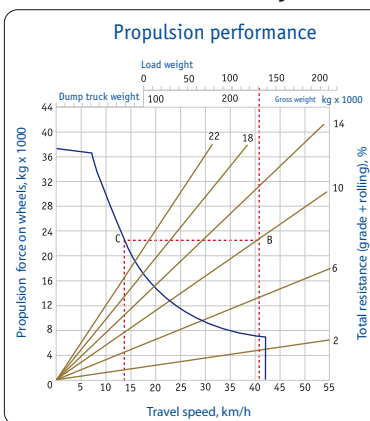
Dump truck weight distribution on axles, %:

	unladen	laden
front	50.9	33.0
rear	49.1	67.0

Capacities

	Metric, l	SAE, gal
Fuel tank	1900	505
Engine cooling system	440	116
Engine lubrication system	245	65
Oil tank	490	129
Reduction units of motorized wheels (2)	92	24
Suspension cylinders:		
- front (2)	33.8	9
- rear (2)	57.4	15

Propulsion and Retarding



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