

Recovery tractor BELAZ-74131

It's effective at towing of disabled mine dump trucks weighing from 70000 to 160000 kg on technological roads under various road and climatic operating conditions.



Engine

Model	CUMMINS KTA 50-C
Four-cycle turbocharged and intercooled direct diesel engine with V-type cylinders arrangement.	
Rated power @ 1900 rpm, kW (hp)	1194 (1600)
Maximum torque @ 1500 rpm, N.m	6292
Number of cylinders	16
Cylinders displacement, l	50,3
Cylinder diameter, mm	159
Piston stroke, mm	190
Specific fuel consumption, g/kW hr	207
Air cleaning is performed by three-stage filter with dry-type elements.	
Engine exhaust expulsion is performed through two mufflers mounted straight up at the recovery tractor sheet guard.	
Circulating lubrication system is pressurized and designed with "wet" sump. Single-loop fluid cooling system with forced circulation.	
Fluid preheating system.	
Pneumatic starter starting system.	
Electric equipment system voltage, V	24

Electric drive

AC-DC drive with traction alternator, two traction motors, motorized wheels double-reduction units with spur gears, adjustment units, microprocessor-based control system and control devices.

Transmission ratio	30,36
Transmission	AC-DC
Traction alternator	GSN 500; GST-1; SGT-1000
Traction motor	EDP-600; EK-590; TED-6; ED-136; EK-420A

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	320
- rear	290

Steering

Hydrostatic steering with steerable front wheels.

Steering angle, degree	42
Turning radius, m	13
Overall turning diameter, m	28
The steering meets ISO 5010 requirements.	

Brakes

Recovery tractor brake system meets ISO 3450 international safety requirements and is equipped with service, parking, auxiliary and emergency brake systems.

Service brake system consists of front wheels disk brakes with two brake gears per disk and rear wheels disk brakes with two brake gears per disk and automatic gap adjustment. 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	UVTR 2x600
Power, kW	1200

Tubeless air tires with quarry tread pattern.

Tire designation

Rim designation

Tires

33.00-51; 33.00R51

24.00-51/5.0

Frame

High-strength low-alloy steel welded frame is equipped with box-section variable-height side-members interconnected by cross-members.



Hydraulic drive

Hydraulic system is combined for operating mechanism, steering and brakes actuator. The system is equipped with variable-displacement axial-piston oil pump.

Maximum pressure in hydraulic system, MPa

18

Maximum pump delivery @ 1900 rpm, dm³/min

474

Filtration degree, mcm

10

Cab

Two-man two-door cab is equipped with air-sprung adjustable driver seat, additional passenger seat and adjustable steering column. The cab meets EN 474-1 and EN 474-6 requirements that specify permissible levels of in-cab noise, vibration, content of hazardous substances and dust.

Driver's workplace meets ROPS and FOPS 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).

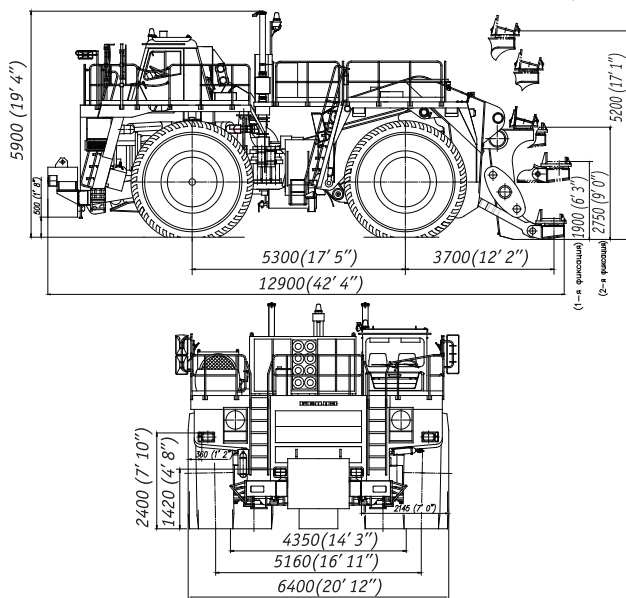
Lifting hitch mechanism

Lifting hitch mechanism consists of fixed bracket and movable bracket. Movable bracket is equipped with removable catches (upper and lower) and moves through fixed bracket by means of rods and two hydraulic cylinders. There are three fixation levels for movable bracket. Fixation of movable bracket is performed from driver cab. Bottom of movable bracket is lowered to the ground. Control of the mechanism is performed electrohydraulically from the driver cab and by means of remote control.

Movable bracket move, mm

2050

Overall dimensions, mm*



*Overall dimensions are specified for basic kitting-up of the recovery tractor

Weight

Operating weight, kg	125000
Unladen weight distribution on axles, %:	
- front axle	50,4
- rear axle	49,6
Maximum force to lifting mechanism at towing by:	
- lower catch, kg	50000
- upper catch, kg	70000
Counterbalance weight, kg	10400

Refill capacities, l

Fuel tank	1900
Engine cooling system	410
Engine lubrication system	195
Oil tank	490
Reduction units of motorized wheels	92 (46x2)
Suspension cylinders:	
- front	38,8 (16,9x2)
- rear	57,4 (28,7x2)

Equipment

Ballast for increment of front axle load; sheet guard with an area for passage from cab to the guard; flashing light and headlight for sheet guard zone lighting; two ladders from right and left side for going upstairs from the ground to the sheet guard and to the cab; boxes for storage of accessories; splash guards of rear wheels; hydraulic connector for joining to dumping gear cylinders of towed dump truck for the purpose of its unloading; hydraulic connector for joining to rear axle brake system of towed dump truck for the purpose of its unbraking at towing; pneumatic connector for air supply to receivers of towed vehicle; six additional fire extinguishers mounted at the sheet guard.

Special equipment

- Fire-fighting system (standard)
- Starting preheater (standard)
- Heating and conditioning unit (standard)
- Hydraulic connector for unloading of towed dump truck (optional)
- Hydraulic connector for unbraking of towed dump truck (optional)
- Automatic lubrication system (optional)
- Telemetering tire-pressure monitoring system (optional)
- Video-vision system (optional)
- Fast fueling system „Wiggins“ (optional)
- Air filters „Fleetguard“ (optional)

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