

Wheeled bulldozer BELAZ-78231

Wheeled bulldozer BELAZ-78231 with wheel arrangement 4x4 is designed for mechanization of earthwork operations and excavation at open pits, large construction projects and other objects.



Engine

Model	CUMMINS KTA19-C
Four-cycle turbocharged direct diesel engine with in-line arrangement of cylinders.	
Rated power @ 2100 rpm, kW (hp)	360 (490)
Maximum torque @ 1500 rpm, N.m	2136
Number of cylinders	6
Cylinders displacement, l	18,9
Cylinder diameter, mm	159
Piston stroke, mm	159
Air cleaning is performed by three-stage filter with dry-type elements.	
Mixed-type lubrication system is designed with "wet" crankcase.	
Fluid cooling system with forced circulation.	
Oil cooling is performed by oil-to-water heat exchangers.	
Electric starter starting system.	
Electric equipment system voltage, V	24

Hydromechanical transmission

Hydromechanical transmission with one-stage torque converter, hydraulic coupling mode, matching gear mode and gearbox with friction clutches.		
Gearbox ratios:		
gears	forward	reverse
1	6,070	3,840
2	3,440	2,270
3	1,670	1,055
4	0,946	0,625

Suspension

Front axle suspension is rigid.
Rear axle suspension is rigid and fully articulated.

Steering

Hydrostatic steering with flow amplifier and two double-acting cylinders.	
Overall turning diameter, m	20

Brakes

Service brakes are single-disk dry friction brakes with hydraulic actuator and hydraulic accumulator.
Parking brake is shoe-drum brake.
Emergency brake uses parking brake and operable circuit of service brakes.

Hydraulic drive

Hydraulic system is combined for mounted equipment, steering and brakes.	
Time of work operations, s:	
- lifting of blade to maximum height	5
- lowering of blade	4
- forward (backward) tilting of blade	4
- lateral tilting of blade	2
Pressure in mounted equipment system, MPa	24
Pressure in steering and brakes system, MPa	17,5

Driving axles

Front and rear driving axles are equipped with single-stage bevel final drive and spur hub drive with three pinions.	
Ratios:	
final drive	3,727
hub drive	7,385
driving axle total	27,524

Driveline

Driveline consists of two cardan shafts and two cardan couplings of open type with joints on needle bearings.

Air tires
Tire designation
Inflation pressure, MPa
Rim designation

Tires
35/65-33
0,425
28.00-33/3.5

Frame
Two articulated half-frames are welded of high-strength low-alloy steel.
Angle of half-frames folding, degree
35

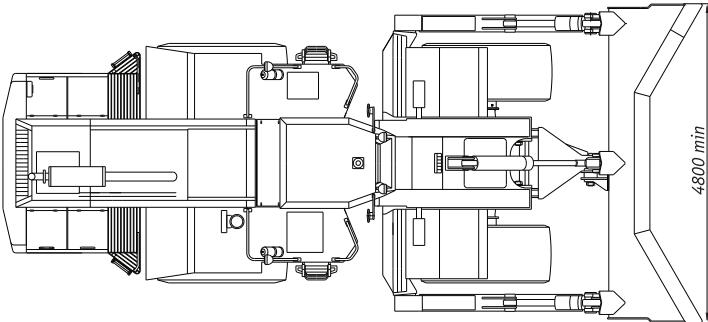


Cab
One-man heat and noise insulated hermetic cab is equipped with ROPS and FOPS systems and meets requirements of standards that specify permissible levels of in-cab noise, vibration, content of hazardous substances and dust.

Weight
Operating weight, kg
Operating weight distribution on axles, kg:
- front axle
- rear axle

Overall dimensions, mm

Capacities, l
Fuel tank
Engine cooling system
Engine lubrication system
Hydromechanical transmission
Hydraulic system
Driving axle



Blade
Coal blade
Straight blade
Universal blade
Cutting edge width, m
Blade height, m
Blade lifting height, m
Blade deepening, m
Blade longitudinal tilt, degree
Blade lateral tilt, degree

