

# BELAZ-75710

## 450 mt 496 t Payload Capacity



### Engine and its Systems

Model MTU DD 16V4000  
Two diesel, four-cycle engines with V-type cylinders arrangement, DDEC electronic control system, direct fuel injection/ common rail, turbocharged and intermediate cooling of the charged air.

|  | Each Engine |
|--|-------------|
| Overall rated power@ 1900 rpm, kW          | 1715        |
| Number of cylinders                        | 16          |
| Overall cylinder displacement, l           | 65          |
| Cylinder diameter, mm                      | 165         |
| Piston stroke, mm                          | 190         |
| Maximum torque@ 1500 rpm, Nm               | 9313        |
| Overall specific fuel consumption, g/kW hr | 198         |

Air cleaning is performed by three-stage filters with dry-type elements.  
Engine exhaust routed through body and mufflers.  
Lubrication system is of forced circulation type under pressure with wet crankcase design.  
Cooling system is of double-circuit fluid type with forced circulation.  
Oil cooling - through water-to-oil heat exchanger.  
Fluid preheating system.  
Pneumatic starter.  
Cooling system impeller drive – hydraulic clutch with automatic control.  
Switching on and off is carried out by thermostat.  
Starting system air pressure, MPa 0.6 - 0.8  
Electric system voltage, V 24

### Transmission

Electromechanical transmission  
AC electric drive Siemens MMT500 with two traction alternators, four traction electric motors and motor-wheel reduction gears, auxiliary electric machines, adjustment and control devices.

|  | Each Alternator     |
|--|---------------------|
| Traction alternator                                  | YJ177A              |
| Power, kW  | 1704                |
| Traction electric motor                              | 1TB3026-0GB03       |
| Power, kW  | 1200                |
| Control cabinet                                      | MMT500 Drive System |
| Planetary type double-row motor-wheel reduction gear |                     |
| Ratio  | 29.2                |

### Steering

Meets the requirements of ISO 5010.  
Hydrostatic, with fluid amplifier driven by variable-flow pump.  
Emergency drive: pneumohydraulic accumulators.  
Turning radius, m 19.8  
Overall turning diameter, m 45  
System pressure, MPa 16.5

### Suspension

Conventional suspension for front and rear wheels. Cylinders are pneumohydraulic (nitrogen and oil). Two cylinders both on the front and rear axles. To provide lateral stability antiroll bars are mounted on each driving axle.  
Cylinder piston stroke, mm  
- front 170  
- rear 170

### Hydraulic System

Combined hydraulic system for body hoist, steering and brake system.  
Oil pump - axial-piston variable-flow pump with pressure regulator.  
Mechanical drive through propeller shaft from output flange of traction alternator.

#### Body hoist

Telescopic body hoist cylinders with two stages and one stage of double action.  
Laden body raising time, s 26  
Body lowering time, s 20  
System pressure, MPa 26

### Wheels

Pneumatic tubeless radial tires with quarry tread pattern.  
Type 59/80R63  
Internal pressure, MPa according to manufacturer recommendations  
Rim type 44.00-63/50

**Body**

Bucket type body is a welded structure with FOPS safety system in accordance with ISO 3449, and a protective canopy, and is heated by engine exhaust gases. It is equipped with a device for mechanical locking in raised position and with rockejectors.

Body capacity in accordance with ISO 6483, m3:  
 struck 157.5                      heaped 2:1 269.5

**Frame**

Frame is a welded structure of high-strength low-alloyed steel. Longitudinal box-section constant height side rails are interconnected by cross-members.



**Brakes**

The braking system meets international requirements according to ISO 3450 and comprises service, parking, auxiliary brakes and retardation system.

Service brake: Front and rear wheels – double-disc brakes with one brake gear per disc and automatic clearance adjustment. The discs are mounted on the shafts of traction electric motors.

Separate hydraulic drive for front and rear wheels.

Parking brake – constantly closed system with two brake gears on outer brake disc of traction electric motors. Spring actuation, hydraulic control. Auxiliary braking consists of parking and service brakes and retarding systems to control the truck.

Retardation system – electrodynamic braking with traction electric motors in alternator mode with forced air cooling of brake resistors.

Brake resistors MMT500 Gridbox

**Cab**

Two-seat cab with ROPS safety system in accordance with ISO 3471 and adjustable operator's seat. Cab meets all standard requirements for internal sound levels, vibration, and dust.

Noise level inside the cab 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).

**Weight**

|                                  |                                    |
|----------------------------------|------------------------------------|
| Payload capacity, kg             | 450000                             |
| Operational weight, kg           | 360000                             |
| Gross weight, kg                 | 810000                             |
| Weight distribution on axles, %: |                                    |
|                                  | unladen                      laden |
| - front                          | 60                              50 |
| - rear                           | 40                              50 |

**Capacities, l**

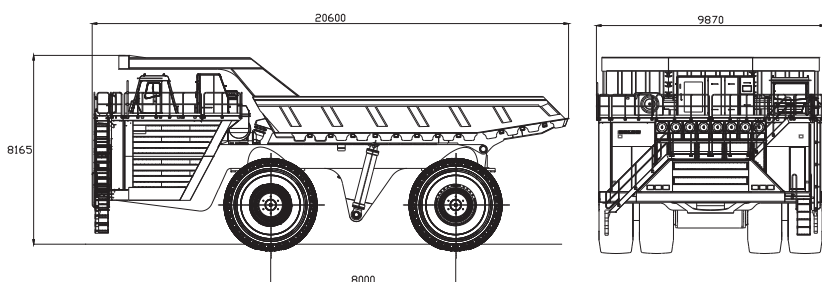
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|-----------------------------|----------------|
| Fuel tank                   | 2x2800         |
| Engine cooling system       | 890            |
| Engine lubrication system   | 2x269          |
| Hydraulic system            | 1800           |
| Motor-wheel reduction gears | 600 (150x4)    |
| Suspension cylinders:       |                |
| - front                     | 125.8 (62.9x2) |
| - rear                      | 125.8 (62.9x2) |

**Special Equipment**

- Starting preheater
- Fire-fighting system with automatic control
- Automatic centralized lubrication system
- Loading and fuel control system
- Telemetering tire inflation control system
- Diagnostics system
- High-voltage line proximity alarm
- Video surveillance system
- Heater and conditioner unit
- Body floor lining (option)
- Wiggins fast-fill fueling system (option)

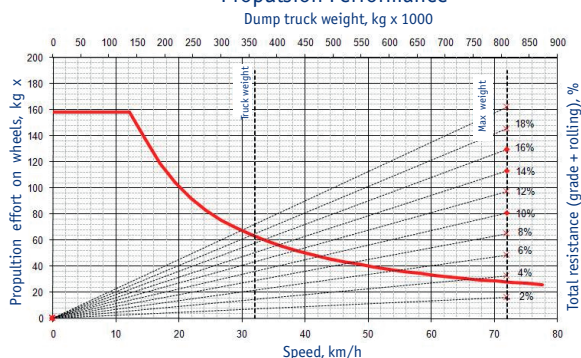
**Overall dimensions, mm\***

\*Overall dimensions are specified for basic kitting-up of the dump truck

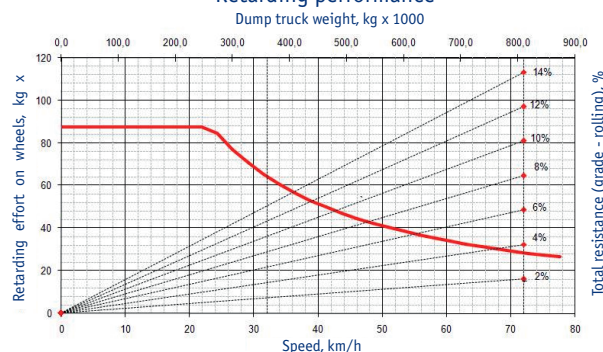


**Propulsion and Retarding Performance**

**Propulsion Performance**



**Retarding performance**



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