

BH150E

REAR DUMP TRUCK



- High Power Performance
- Enhanced Productivity
- Increased Reliability
- Excellent Serviceability
- Exceptional Maneuverability
- Superior Operating Comfort
- Improved Safety



Maximum Pay Load	: 136 MT
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Capacity (Heaped) SAE/ISO 2:1	: 82 m ³
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BH150E

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REAR DUMP TRUCK

Salient Features :

Power Performance: High power Electronically controlled, Fuel efficient, CUMMINS Diesel engine with AC Drive system from GE ensures smooth ride, with continuously variable torque-speed curve delivering maximum power over the operating speed range and also caters to consistent performance on steep gradients.

High Productivity: High power to weight ratio ensures excellent productivity and also ensures increased engine life. Wide body design., higher volumetric capacity and a low loading height ensures high productivity.

Reliability: Diesel-electric power module (AC drive system) with few wearing parts guarantees highly reliable performance, more durability and high availability.

Serviceability: Ease of maintenance and repair ensured for excellent service ability.

Maneuverability: Power steering, Optimum turning circle radius, provides for high degree of maneuverability.

Comfort: Ideally located spacious deluxe cabin with ergonomically designed Operator & co-operator seat with tiltable telescopic steering column and control panels along with dashboard mounted Air Conditioning system provide Operator with maximum comfort and operating ease.

Safety: Truck has built-in safety features like ROPS Cabin, Emergency power steering, Electrical dynamic retarding and all hydraulic brake system meeting the relevant safety standards. Fire retardant hydraulic hoses meeting MSHAS standard are used to ensure high degree of safety. Rear view camera & blind spot mirrors are provided to ensure excellent all round visibility.



ENGINE

Make	CUMMINS
Model	QSK50C - EPA Tier II Compliant
Type	IC-diesel, 4 stroke, Turbocharged, Cooled Chargeair Direct injection, Electronic engine.
Number of cylinders	16, V-Configuration
Bore x stroke	ø159 x 159 mm
Displacement	50.3ℓ
ENGINE power	1398 kW(1875 hp) @1900RPM
Maximum net torque	7871 Nm @ 1500 RPM
Electricals	Meets SAE J1349
Starting motor	24 V DC, 11kW (2 Nos)
Battery	4x12V, 100 Ah (Sealed maintenance free batteries)
Alternator	24 V DC, 260A



DRIVE SYSTEM

AC Drive Alternator	5GTA22
Control	INVERTEX AC Drive Systems
Wheel Motors	5GEB23, AC Wheel motor
Gear Reduction Ratio	28.8:1
Travel speeds (km/h)	64 kmph Maximum



FRAME

Type	Special alloy steel with integral front bumper, rear tubular cross member, continuous frame rail beam with variable section and rugged continuous horse collar.
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CABIN

Type	Integral ROPS Cabin, Sound suppressed with electronic display dashboard
(Meets ROPS performance criteria as per ISO 3471)	

STANDARD EQUIPMENT

Alternator (24V / 260Amp)* Auto lubrication system * Auto fire suppression system * Body down indicator * Back up Alarm (Audio Visual) * Electric Start * GE IGBT Control cabinet * Hoist control * Injector Bank Monitoring system * Payload Monitoring system * Continuous rated Retard grids * Retard speed control * Rear view Camera * Operator fatigue * Front camera * Auto dimmer * Anti-collision * 3-point seat belt * Fast fuel filling.

SAFETY

Battery Relay * Interlocks in drive system * Battery cut-off switch * Blind Spot Mirrors * Circuit breakers (miniature type resettable) * Dynamic Retarding with continuous rated grids * Engine shutdown at ground level * Hoist overload Interlock * Electric horns * Power steering Accumulator assisted Emergency steering * Seat belts * Proximity warning device

STANDARD CAB

Air cleaner Vacuum indicators * Air conditioner * Combinational switch * DID panel for GE control * Dump override switch * Electric operated Operator seat * Engine shut down switch * Engine Diagnostic connector * FM/AM CD Player with speaker * Fan * Hoist control switch * LED Roof lamp * Power window * Payload Monitoring Display unit * Retard Speed control switch * Retard Speed Potentiometer * RS 232 port (3 No.) * Shift selector * Starter Key switch * Wind shield washer * Wind shield Wiper motor.

OPERATOR CONSOLE

Electronic Display : * Battery voltage * Engine Oil pressure * Engine Oil temperature * Engine coolant temperature * Engine speed * Intake manifold temperature * Fuel level * Hour meter * Odometer * Speedometer * Tachometer * Brake oil temperature * Voltmeter * High beam indicator * Left & Right indicator * Seat belt indicator * Park brake indicator.

LIGHTING

Head lights : Halogen/LED * Backup up lights: Halogen * Turn signal, Brake and tail lamps: LED type * Driving Light : Halogen * Fog light : Halogen * Ladder lights: halogen * Manual Back-up lights: Halogen * Service light in Rear Axle and engine compartment: Halogen * Cabin roof lamp: LED type * Deck lamps on LH and RH side for Load indication: LED type.

OPTIONAL ATTACHMENTS

Body liners, Heater unit, Tyre pressure monitoring system.



BODY

Rubber Pad mounted.

Exhaust heated type; Rugged bolster and sill construction

BOTTOM PLATE	20mm thick plate of Tensile strength 1000 MPa
FRONT PLATE	12mm thick plate of Tensile strength 690 MPa
SIDE PLATE	10mm thick plate of Tensile strength 690 MPa

Volumetric capacity (m³)

STANDARD

Struck	56
Heaped - SAE/ISO (2:1)	82
Loading Height/Dump height	5400 mm/ 11800mm



BRAKES

Service brakes	All hydraulic actuated
Front	3-calipers on 39" OD disc. Single disc per wheel
Rear	20" OD dual disc. 2 caliper/disc
Emergency	Automatically applied when accumulator pressure drops below specified value.
Parking brake	Spring applied Hydraulic released
Retarder brake	Electro Dynamic Retarding with Grid Cooling
Meets SAE / ISO 3450 performance requirements.	



MASSES

Net vehicle mass	104,000 kgs
Rated payload	136,000 kgs
Gross vehicle mass	240,000 kgs
Mass distribution	Empty Loaded
Front axle, kgs	48,900 (47%) 79,200(33%)
Rear axle, kgs	55,100 (53%) 1,60,800 (67%)



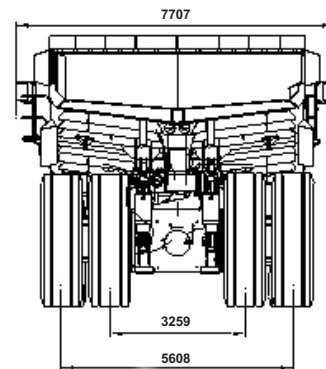
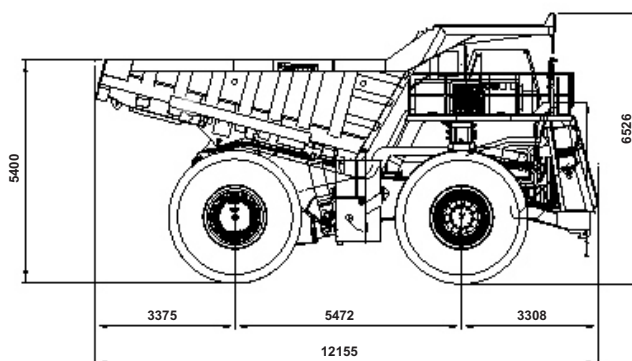
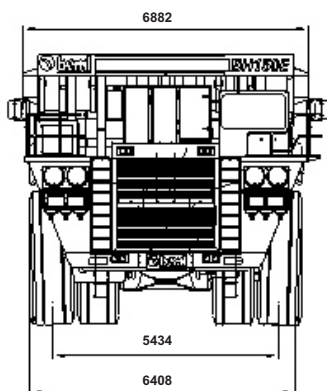
HYDRAULIC SYSTEM

Hydraulic pump	
Type	Tandem Pump - VANE type
Relief pressure	
Steering	220 bar (3200 psi)
Brake	220 bar (3200 psi)
Hoist cylinders	Twin, 3 stage double acting, Telescopic type
Hoist Timing	
Power up loaded	22 +/- 2 sec
Power down	13 +/- 2 sec



SUSPENSION

Type	
-Front	Frame mounted, Hydro-Pneumatic, integral rebound control.
-Rear	Axle mounted, Hydro-Pneumatic, integral rebound control.
Cylinders	Front Rear
Quantity	2 2
Bore x stroke (mm)	336 x 382 336 x 410
Charging Height (mm)	290 295



Material and specifications are subject to change without notice, Illustrations may include optional equipment & accessories



STEERING SYSTEM

Type	Twin cylinder with Accumulator assisted Emergency steering.
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Cylinder	
Type	Double acting, piston type
Quantity	Two
Bore x Stroke	127 x 650 mm
Relief pressure	210 Bar
Performance	
Turning radius	13.35 mts



TYRES

Size (Front & Rear)	33.00 R51 Radial tyre
Rim size	24" x 51"

BEML recommends the user to evaluate all job conditions and consult the tyre manufacturer to make proper tyre selection.



SYSTEM REFILL CAPACITIES

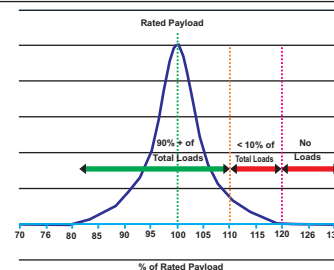
System	Capacity (Litres)
Cooling System	516
Fuel tank	3000
Crank case (including lube oil filters)	204
Hydraulic system	600
Motor Gear Box	40



PAYLOAD POLICY

Loading policy is established considering the material density, fill factors and loading equipment. The loading policy is intended to identify the guidelines for the loading of BEML Trucks and is valid for approved applications and Haul profiles only.

The following graph illustrates an acceptable distribution of payloads on a monthly basis. The mean payload does not exceed the Rated Payload, no more than 10% of all loads exceeds 110% of the Rated Payload, and no load exceeds 120% of the Rated Payload.



Normal Distribution for Off-Highway Truck Payload

- The mean of all payloads for any calendar month shall not exceed the Rated Payload as defined above.
- Overloads between 10-20% of the Rated Payload are allowable on an infrequent basis but shall not exceed 10% of all loads in a given month.
- No single overload of 20% or greater of the Rated Payload is allowed.

Implications of Overloading

- Overloads have a direct impact on overall cost of operations and life of components that have been specially designed based on a rated GVW.
- Operating outside the stated loading policy during any type of warranty period shall void Drive system and all component warranties
- Operation outside the stated loading policy during any type of guarantee period, including but not limited to service contracts and availability guarantees, can also void any such agreements or cause an adjustment thereof.

BH150E

**REAR DUMP
TRUCK**

TECHNICAL SPECIFICATIONS

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Represented by:

बी ई एम एल लिमिटेड BEML LIMITED

Schedule 'A' Company under Ministry of Defence, Govt. of India

Rear Dump Truck

BH35-2

BH60M

BH100

BH100S

BH150E

BH205E

Form No. BH150E/01/2022