

BH205E-AC

ELECTRIC REAR DUMP TRUCK



FIRST TIME DEVELOPED IN INDIA

- High Power Diesel Engine from Cummins Electric Drive by GE
- Low maintainability and repairability indices
- Superior operating Comfort
- Compliance to Safety norms

**205
TON**



Maximum Payload	: 186 MT (205 U.S. Ton)
Capacity (Heaped) SAE/ISO 2:1	: 111m ³
Gross Power	: 2300HP (1716kw) @ 1900 RPM

www.bemlindia.in

BH205E-AC REAR DUMP TRUCK

Salient Features :

Performance:

High power diesel Cummins engine and world renowned General Electric for electric drive, provide smooth consistent gradeability and acceleration performance.

Productivity :

High power to weight ratio gives ample reserve power for increased engine life. More target area, higher volumetric capacity and a low loading height ensures high productivity.

Reliability :

Diesel-electric power module with few wearing parts offer more durability and high availability.

Serviceability :

Low maintainability and repairability index makes easy serviceability.

Maneuverability :

Power steering with wide steering angle, results in short turning radius.

Comfort :

Ideally located spacious deluxe cabin, easy to read and easy to reach instrument panel and operation switches, large tinted glass windows with excellent visibility for increased operator's comfort.

Safety :

Features include emergency power steering, electrical dynamic retarding with continuously rated blown grids and all hydraulic caliper disc brakes meet relevant safety standards.



ENGINE

Make	CUMMINS
Model	QSK60 Tier-II / Tire-I (COMPLIANCE)
Type	Diesel, 4-stroke, turbo-charged, after cooled direct injection water cooled
Number of cylinders	16
Bore x stroke	ø 159mm x 190 mm
Displacement	60 l
Gross power	2300 HP (1716 kW) @ 1900 RPM
Maximum torque	9055 Nm @ 1500 rpm



ELECTRIC DRIVE

Make	GE
AC Current Alternator	5GTA41
Control	IGBT
Motorized* wheel	5GEB25
Ratio	31.875 : 1
Speed (max.)	65 kmph
Electricals	
Alternator	24V, 260A
Lighting	24V
Battery	Four, 12V batteries in series/parallel 200Ah capacity with disconnect switch

* Wheel motor application depends upon gross vehicle weight haul road grade, haul road length, rolling resistance and other parameters. BEML and Drive system supplier must analyze each job condition to assure proper application.



STEERING SYSTEM

Type	Accumulator assisted twin cylinder provide constant rate steering.
Emergency steering	Automatically applied by accumulators
Turning Diameter	28 m



BRAKES

Service brakes	All hydraulic actuated
Front	3-Caliper on a 46" O.D. single disc.
Rear	25" / 635mm dual disc- 2 caliper/disc
Parking brakes	Spring applied, hydraulically released
Emergency Brakes	Automatically applied prior to hydraulic system pressure dropping below level required to meet secondary stopping distance.
Retarder	Electric dynamic retarder.
Brake system meets ISO : 3450	

OPERATOR ENVIRONMENT

Air conditioning, Radio / CD player, MP3 input with speaker.

Gauges / Indicators : Air cleaner service indicator, Auto lube visual / audio alarm, coolant temperature gauge, Volt meter, Fuel level gauge, Speedometer, odometer & hourmeter, Tachometer, Engine oil pressure gauge, Engine oil & Coolant temperature, Check engine indicator, Hydraulic oil level and temperature, Low blower pressure, Low brake pressure, Low steering pressure, Stop engine, Turn indicator lights, High low beam indicator, Dump Body indicator Park brake indicator, Seat belt indicator.

Standard operator cab : ROPS / FOPS cab with Insulation / Sound deadner, Hoist Joystick, Electric Horn, Light dome / Roof lamp, Engine start / stop switch, High / low beam switch, Park brake switch, Seat air suspension type, Seat belt - Retractable 3-point seat belt, Steering wheel, Sun visor, Windshield wiper, Windshield washer, Engine diagnostic connector, PLMS display unit, Retard speed control switch, Retard speed potentiometer, shift selector.

Maintenance : Lubrication automatic, Fast fuel filling

Safety : Fire extinguisher, Deck and hand rails, Dump body Locking - wire rope type, Reverse alarm, Reverse hoist interlock, Emergency brake auto apply, Exhaust blankets, Fire suppressant system, Circuit breakers, Wheel chocks., Operator fatigue monitoring system, Front & Rear view camera, Auto dimmer, Anti-collision Blind spot mirrors.

ELECTRICAL : Alternator, Ground level electric isolator switch, Ground level engine shutdown switch, Batteries - 4 x 200 Ah, LED headlights 4 (high / low beam), Lights-Service group, Lights - Access steps, Lights - rear, dynamic braking, service, brake, backup alarm, Braided conduit harness, Fog lights.

Miscellaneous : Access ladder, Automatic auxiliary steering (accumulators). Engine service ladder (left & right) Rear view mirrors (left & right) Skid resistant deck top, Converter 24 volt to 12 volt, 5 Amp capacity, Dry air cleaners, Front wheel fender and mudguard, Fuel tank sight gauge, Hydraulic test ports, Rock ejectors, Service lights in rear axle, Under hood lights.

POWER TRAIN : Engine prelube, Radiator, Brakes - Front/rear dry disc, Brakes - parking, Brakes - Electric dynamic retard, Traction control system.

Guards : Radiator fan guard, Pump drive guard.

OPTION : Tire Pressure monitoring system, Hot start (cold weather), Body liners. Jump start connector, Battery charging connection, Lighting - Backup (additional), Lights -Side profile marker, 12 volt power port, Rear View Mirror, Heater.



TYRES

Front & Rear 40 R 57 - E4

Rim 29" x 57" x 6"

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



HYDRAULIC SYSTEM

Pump Tandem gear pump and Axial piston pump

Relief Pressure

Steering 210 bar (3045 psi)

Brake 175 bar (2538 psi)

Quick disconnects for system diagnostics.

Hoist cylinders Two, 3-stage cylinders, Over centre damping provided for reliability and smooth dumping

Hoist timing

Power up loaded 22 ± 2 sec

Power - down 14 ± 2 sec



SUSPENSION

Type Variable rate hydro pneumatic with integral rebound control.

Max. stroke

Front 370 mm

Rear 90 mm

Max. rear oscillation ± 3.26 deg.



BODY

Rugged bolster and sill construction. Body is rubber mounted on frame. Exhaust heated body.

Bottom plate 1000 MPa minimum yield strength steel, 20 mm Thick, two piece construction.

Front plate 690 MPa yield strength steel, 12mm Thick.

Side plate 690 MPa yield strength steel, 10 mm Thick

Volumetric capacity **Struck** : 77 m³ **Heap SAE-2:1** : 111 m³

Loading height 5.61 m

*Body weight does not include body liner. If used, will add considerable weight to the body.

* Exact loading height may vary due to tire make & inflation pressure.



FRAME

Type Box type section made of high tensile strength alloy steel with integral front bumper and rail beams are with variable sections. Steel castings at critical stress transition zones.

Plate Material 490 MPa tensile strength steel

Top plate thickness 25 mm

Bottom plate thickness 32 mm

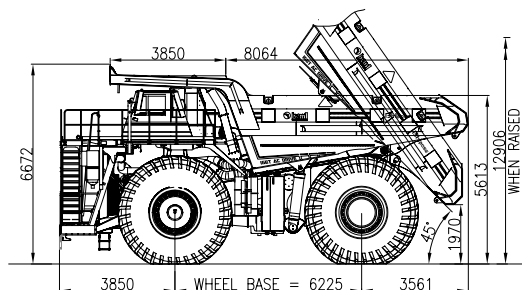
Side plate thickness 16 mm

Drive Axle alignment Swing link between frame & axle.



CABIN

Type : Deluxe interior, fully enclosed, superb working comfort, adjustable operator seat with air suspension and lumbar support, rubber-mounted, padded armrest, (panel-mounted) circuit breaker, electric "wet" windshield wiper, Power windows(LH), Sliding Windows (RH), excellent visibility, adjustable steering wheel, tinted safety glass windshield, Standard ROPS/FOPS.



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



MASS

Net Vehicle weight 1,56,500 kg

Rated Payload (Target) 1,86,000 kg

Gross vehicle weight 3,42,500 kg

Mass Distribution **Front Axle** **Rear Axle**

Empty (kg) 78,720 77,780

(50.3%) (49.7%)

Loaded (kg) 1,13,025 2,29,475

(33%) (67%)

Nominal GVW not to exceed 3,42,500 kg including options, fuel & payload. Weights in excess of this amount require BEML / GE approval.



SYSTEM REFILL CAPACITIES

System **Capacity (Litres)**

Cooling System 400

* **Crank case** 261

Hydraulic system 950

Motor gear box 40 each

Fuel 3550

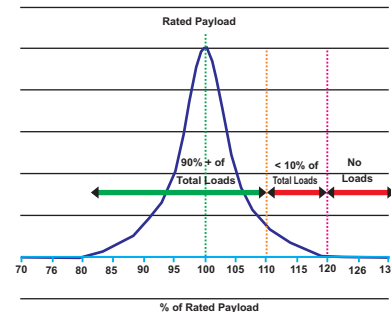
* includes lube oil filters



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.

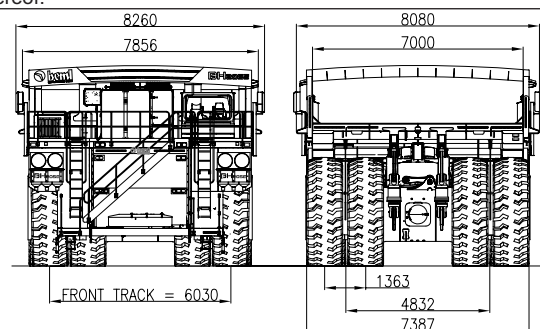


Normal Distribution for Off-Highway Truck Payload

- 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.



BH205E-AC

**REAR DUMP
TRUCK**

TECHNICAL SPECIFICATIONS

बी ई एम एल लिमिटेड BEML LIMITED

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

Business Network

Corporate Office

BEML Soudha, 23/1, 4th Main,
S.R. Nagar, Bangalore – 560 027

T + 91 80 22963240, 22963250

F + 91 80 22963278/516/280/164

E-mail: office.cpd@beml.co.in
corpcomm@beml.co.in

International Business Division

Flat No. E,F,G, H, 'Vandana' 11th Floor,
11, Tolstoy Marg, Connaught Place
New Delhi – 110 001

T + 91 11 23316500

F + 91 11 23325085

E-mail: mx@beml.co.in

Marketing Division

5th Floor, Unity Building,
J.C. Road, Bangalore – 560 002

T + 91 80 22963501/02/07/510/540

F + 91 80 22963541

E-mail: m@beml.co.in
mmd@beml.co.in

REGIONAL OFFICES

Bangalore

4th Floor, Unity Building, J. C. Road,
Bangalore - 560 002
Karnataka

T + 91 97413 51588
E-mail: mg@beml.co.in

Bilaspur

1-A, Industrial Area, Sector-C, Sirgitti,
Bilaspur - 495 223.
Chhattisgarh

T + 91 7752 252745, 252598
F + 91 7752 252065
E-mail: mv@beml.co.in

Neyveli

F-4, Dr. Rajendraprasad Road,
Block-27, Neyveli- 607 803
Tamil Nadu

T/F + 91 4142 268517
T + 91 4142 265517 / 229392
E-mail: ma@beml.co.in

Dhanbad

Mouza - Kangalo, Amaghata,
Govindpur, KG Ashram Post, Dhanbad
Jharkhand - 828 109

T + 91 94711 92023
E-mail: mf@beml.co.in

Hyderabad

3-6-114, Street No.18, Himayat Nagar,
Hyderabad - 500 029
Telangana

T + 91 40 2322 7032 / 94907 93117
F + 91 40 23221794
E-mail: rm.hyderabad@beml.co.in

Kolkata

35/1A, Taratala Road,
Kolkata - 700 088.
West Bengal

T + 91 33 2401 5286 / 87 / 98 / 99
F + 91 33 2401 5288
E-mail: rm.kolkata@beml.co.in

Mumbai

32A, Bazar Road,
Near Jain Mandir, Bandra (West), Mumbai,
Maharashtra - 400 050

T + 91 22 26431875 / 26435875
F + 91 22 26423928
E-mail: rm.mumbai@beml.co.in

Nagpur

No 33, Cement Road,
Shivaji Nagar,
Nagpur - 440 010, Maharashtra.

T + 91 712 2248435 / 2248343
F + 91 712 2249997
E-mail: mn@beml.co.in

New Delhi

Flat E,F,G,H, 'Vandana', 11th Floor,
11, Tolstoy Marg, Connaught Place,
New Delhi - 110 001

T + 91 11 2344 3511 / 3528 / 2331 6500
F + 91 11 2332 5085
E-mail: ml@beml.co.in

Ranchi

206/D-1, Bhagirathi, (Behind NCC Campus)
Rameshwaram Colony, Bariatu Road,
Ranchi, Jharkhand - 834 009

T + 91 651 2540710 / 94311 08531
E-mail: mr@beml.co.in

Sambalpur

BEML Complex, NH-6, Panchagachhia,
Baraipalli Post, Sambalpur 768 006
Odisha.

T + 91 663 2521604 / 2521389
E-mail: mb@beml.co.in

Singrauli

PB No. 5, Jhingurdha Colliery,
Singrauli - 486 889
Madhya Pradesh.

T + 91 7805 272668 / 272318
F + 91 7805 272282
E-mail: rm.singrauli@beml.co.in

ACTIVITY CENTRES

Bhopal

Ground Floor, Hall No.1, Chittod Complex, Zone-1,
Maharanapratap Nagar (MP Nagar), Bhopal - 462 011

T + 91 755 2550711 / 8989459753

Panjim

BEML Limited, 5/4, Victor Building, Fontanhas, Mala,
Panjim - 403 001, Goa

T + 91 832 2225135 / 77986 87178

Itanagar

C/o. Tobom Riba, H-Sector, Papum
Itanagar - 791 113, Arunachal Pradesh

T + 91 94029 34205 / 88372 15852

Kochi

No. 39/2122, Chittoor Road, Ernakulam South,
Kochi - 682 016

T + 91 484 2375138
E-mail: rm.kochi@beml.co.in

Maihar

Maihar, Madhya Pradesh

Mob: +91 79875 53768

Silapathar: Surya Vatika, Amritpur, Silapathar, Assam - 787 059 T + 91 95311 29059

DISTRICT OFFICES

Ahmedabad

99/100, BEML HOUSE, 2nd Street,
Azad Society, Ambawadi,
Ahmedabad - 380 015, Gujarat

T + 91 79 26445523 / 94264 13620
F + 91 79 26423950
E-mail: rm.ahmedabad@beml.co.in

Asansol

3, Burnpur Road,
Asansol - 713 304
West Bengal

T + 91 341 2252480
F + 91 341 2250601
E-mail: mca@beml.co.in

Bacheli

Behind Central Stores of NMDC Ltd.,
Depot 5, Bacheli - 494 553.
Chhattisgarh

T/F + 91 7857 230005
E-mail: rm.bacheli@beml.co.in

Bhilai

Room no 22/C, BSP Expansion Building,
Near Ispat Bhavan, Bhilai 490 001, Chhattisgarh

T + 91 788 2223880
F + 91 788 2221652
E-mail: mnb@beml.co.in

Bhubaneswar

252/A, Lewis Road
Bhubaneswar - 751 014
Odisha

T + 91 674 2434427 / 99373 83950
E-mail: mbb@beml.co.in

Chandrapur

Mamidwar, Tiles Factory Compound
Ghugus Road, Padoli
Chandrapur - 442 406 Maharashtra

T + 91 7172 287230
F + 91 7172 287560
E-mail: mnc@beml.co.in

Chennai

Flat No. 10, Supriya Estates,
No.3, Sterling Road, Nungambakkam,
Chennai - 600 034, Tamil Nadu,

T + 91 44 28220844
F + 91 44 28257319
E-mail: rm.chennai@beml.co.in

Guwahati

No.11, Ward 43, Hengrabari Road,
Ganesh Puri, Dispur,
Guwahati - 781 006 Assam

T + 91 361 2232966
F + 91 361 2232967
E-mail: rm.guwahati@beml.co.in

Hospet

No.1431, Manjunatha Complex,
Bhagat Singh Nagar, Opp. KSSIDC Indl. Estate,
Dam Road, Hospet - 583 203, Karnataka

T/F + 91 8394 230172
E-mail: rm.hospet@beml.co.in

Jammu

62C, Block D/C, Gandhi Nagar,
Jammu tawi - 180 004
Jammu and Kashmir

T + 91 191 2459 437
F + 91 191 2430 447
E-mail: mlj@beml.co.in

Kothagudem

Old Project Planning Department,
Near SCCL Corporate Office,
Kothagudem - 507 101, Telangana

T + 91 8744 245572
F + 91 8744 245530
E-mail: rm.kothagudem@beml.co.in

Leh

174-B, (Near Royal Enfield Showroom),
Housing Colony, Leh, Ladakh -194 101

T + 91 1982 258828 / 94198 71008
E-mail : ml@beml.co.in

Ramagundam

Near SCCL TTC, Jawahar Nagar,
Behind CISF Camp, Godavarikhani - 505 209.
Peddapalli Dist.,Telangana

T + 91 8728 248299 / 94408 58441
E-mail: mhr@beml.co.in

Udaipur

20-B,Uchhab Bhavan, Bedla Road,
Fatehpura, Udaipur - 313 001.
Rajasthan

T + 91 294 2452054
E-mail: mwu@beml.co.in

Visakhapatnam

No. 8-45-11, 4th Lane,
Vidyanagar Chinna Waltair Colony
Visakhapatnam - 530 003, Andhra Pradesh

T/F + 91 891 2754608 / 83320 54590
E-mail : rm.vizag@beml.co.in

www.bemlindia.in

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-AC

Form No. BH205E-AC/01/2022