

BH100

REAR DUMP TRUCK



Salient Features

- **Reliable Performance** : High power Cummins (India) KTA38-C / QST30-C engine rugged BEML Powershift transmission incorporating Unified Electronic Control (U.E.C) and BEML heavy -duty planetary axle provide optimum combination of speed and tractive effort
- **Outstanding Productivity** : High power to weight ratio gives ample reserve power for faster cycle time. More target area, higher volumetric capacity and a low loading height ensures high productivity.
- **Reliability** : Adjustment free wet multiple disc brakes for rear axle and dry caliper disc brakes for front axle offers long life.
- **Serviceability** : Low maintainability and reparability index, evaluated through SAE-J817A, compared to any other dumper in its class.
- **Manoeuvrability** : Orbitrol power steering with a good combination of steering angle, turning circle, tread and wheel base provide high degree of manoeuvrability.
- **Comfort** : Ideally located spacious cabin with ergonomically designed operator seat and controls, offer maximum comfort and operational ease.
- **In-built Safety** : Features include ROPS cabin, emergency power steering, auto retarder and dual brake system to meet relevant safety standards.
- **Total Customer Support** : The best in the Industry.



Max. Payload : 91500 kg
Body Capacity : 61 m³
Flywheel Horse power : 983 hp @ 2100 rpm

BH100



BH100 REAR DUMP TRUCK SPECIFICATIONS

Technical Specifications



Engine

Make	Cummins (India)	Cummins
Model	KTA38-C	QST30-C
Type	IC-Diesel, 4 stroke, turbocharged, after cooled, direct injection, water cooled	IC-Diesel, 4 stroke, turbocharged, after cooled, electronic injection, water cooled
No. of cylinders	12, V-type	12, V-type
Bore & Stroke	φ 159 x 159 mm	φ 140 x 165
Displacement	37.7 ltrs.	30.5 ltrs.
Flywheel power(net)	733 kW (983 hp) @ 2100 rpm	746 kW (1000 hp) @ 2100 rpm
Maximum net torque	4637 Nm @1250 rpm	4629 Nm @1300 rpm
	(Meet -SAEJ1349)	
Electricals		
Starting motor	24V DC, 9KW (2 nos.)	24V DC, 9KW (2nos.)
Battery	4 x 12 V, 200 Ah	4 x 12 V, 200 Ah
Alternator	24 V DC, 75 A	24 V DC, 75 Ah



Power Train

Transmission							
Model	BEML						
Type	Powershift, 7F / IR						
Drive axle							
Model	BEML						
Type	Full floating, planetary						
Differential							
Type	Standard						
Ratio	3.07:1						
Final drive							
Type	Planetary gear						
Ratio	7.235 : 1						
Total reduction	22.21 : 1						
Travel speeds (km/h)							
Range	1st	2nd	3rd	4th	5th	6th	7th
Forward	9.42	13.26	17.85	24.04	32.37	44.18	59.54
Reverse	11.23						



Suspension

Type - Front	Frame mounted, hydro-pneumatic, integral rebound control	
- Rear	Axle mounted, inverted hydropneumatic, integral rebound control	
Cylinders		
	Front	Rear
Quantity	2	2
Bore x stroke (mm)	φ 273 x 376	φ 273 x 193
Charging pressure	3.1 MPa (31.7 kg/cm ²)	2.0 MPa (20.4 kg/cm ²)
Load/ Deflection rate		
Empty (kg/cm)	952	712
Loaded (kg/cm)	3110	15373



Frame

Type	Box section construction made of high tensile strength steel with integral castings.
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Hydraulic System

Hydraulic Pump	
Type	2 nos. of tandem gear pump for hoisting, steering and brake oil cooling.
Capacity	1) 645 ℓ @ engine rated 2136 rpm 2) 607 ℓ @ engine rated 2136 rpm
Relief Pressure	
Hoist	22.07 MPa (225 kg/cm ²)
Brake oil cooler	0.98 MPa (10 kg/cm ²)
Hoist cylinders	Twin, 3 stage double acting, telescopic type.
Body Hoist time	12 +/- 1.5 Sec.



Brakes

Service Brakes	
Front	Air-over-hydraulic, dry caliper disc
Rear	Air-over-hydraulic, wet multiple disc
Emergency brakes	Air-over-hydraulic, automatic application through relay emergency valves.
Parking brake	Spring applied air released dry caliper disc type
Retarder brake	Rear brake serves as retarder brake (Meets the SAE J1473 and ISO 3450 performance requirements.)



Steering system

Type	Orbitrol, full hydraulic power steering
Cylinder	
Type	Double acting, piston type
Quantity	Two
Bore x Stroke	φ 120 mm x 430 mm
Relief pressure	21.6 MPa (220 kg/cm ²)
Emergency steering	Electrically driven hydraulic pump & motor
Performance	
Turning radius	9.9 m
Vehicle clearance diameter	21.0 m



Tyres

Size (Front & Rear)	27.00 x 49.00, 48 PR
Rim size	19.5 x 49
BEML recommends the user to evaluate all job conditions and consult the tyre manufacture to make proper tyre selection.	



Masses

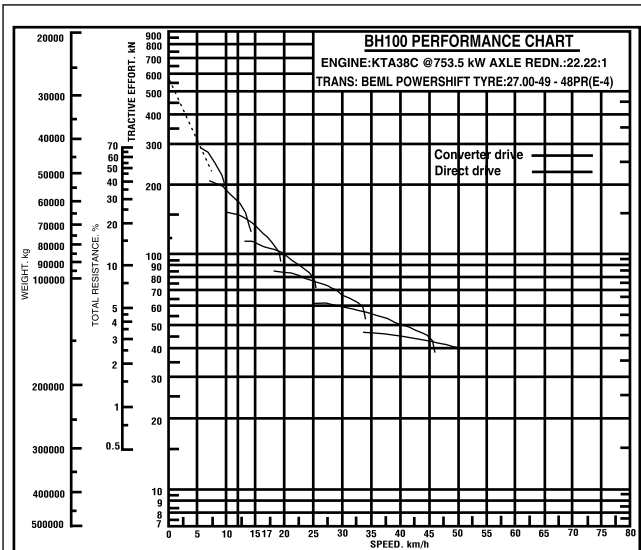
Net vehicle mass	74,000 kgs	
Rated payload	91,500 kgs	
Gross vehicle mass	1,65,500 kgs	
Mass distribution		
	Empty	Loaded
Front axle, kgs	34,780 (47%)	54,450 (33%)
Rear axle, kgs	39,220 (53%)	1,11,050 (67%)



System Refill Capacities

Systems	Capacity (litres)
Cooling systems	270
Fuel tank	1240
Engine lub. oil	130
Transmission & Torque converter	110
Differential	115
Final drive (each side)	120
Hydraulic tank	510
Air tanks	175
Suspension - Front	24 (each)
- Rear	16 (each)

Performance Chart



How to use this chart : Draw a straight line from gross vehicle mass to percent of total resistance (total resistance = grade resist - once + rolling resistance) and extend the same the upto tractive effort. From this point draw horizontally to the curve with the highest obtainable gear then vertically down to obtain maximum speed.

Body

Plate thickness (mm)	
Bottom plate	20
Side plate	10
Front plate	12
Target area (mm ²)	
(Length x Width x Depth) mm	7462 x 5100 x 1843
Volumetric capacity (m ³)	
Struck	42.5
Heaped - SAE/ISO (2:1)	61.0



Cabin

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

Standard Equipment

GENERAL :

Air dryer, Air horn, Battery relay switch, Head lights, Unified electronic controller includes payload monitoring, Vehicle monitoring system and hoist controls, Vandalism protection kit, Alternator, Key-switch, Wiper motor, Windshield washer, Dump brake, Right & left hand mirror, Portable fire extinguisher, Tool kit, Parking brake valve, Tilt steering wheel and column, Exhaust heated body, Catwalk, Mudflaps, Shift indicator, Rock ejectors, Cabin floor mat, Safety seat belt, Co-operator seat, Gauge light, Front brake cut-off switch, Emergency brake, Engine shut-off switch, fresh air fan, LED lamps for turn signal, Tail, hazard, parking & stoplights, Fog lights

Tow hooks front & rear, Reverse hoist interlock, Retarder, Automatic centralised lubrication, Automatic fire suppression system, Air conditioner, Engine bay light, Rear focusing light, Auto emergency steering.

INDICATORS

Ammeter, Voltmeter air pressure, Engine oil pressure, Water temperature, Transmission oil temperature, Brake oil temperature, Air cleaner restriction, Speedometer, Tachometer, Electrical hour meter, Engine oil temperature

ALARMS

Air pressure, Water temperature, Transmission oil temperature and pressure, Lube oil pressure, Brake oil temperature, Body up and parking brake "ON", Back up alarm, Centralised alarm for hydraulic oil filter clogging (steering & hoist), Radiator water level

GUARDS

Engine & Transmission belly guard, Cab spill guard, Drive line protector, Rock guard, Radiator fan guard and hand rails (Meets the ISO 3457 requirements.)

GAUGES

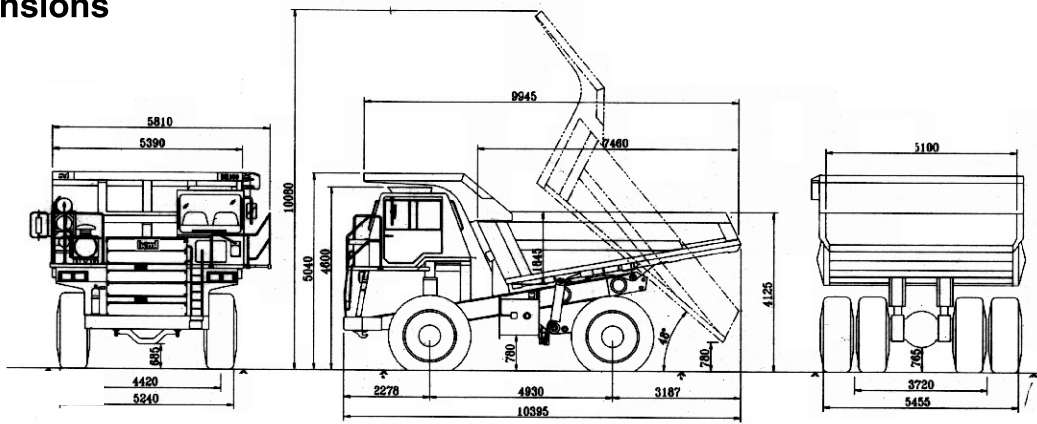
Ammeter, Voltmeter, Air pressure, Engine oil pressure, Water temperature, Transmission oil temperature, Brake oil temperature, Air cleaner restriction, Speedometer, Tachometer, Electrical hour meter, Engine oil temperature.

OPTIONAL EQUIPMENT

Tyre Inflation kit, Suspension charging kit, Exhaust muffler (Non exhaust heated body), Wiggins fast fuel system, Ladder light, Work lamp, battery 100 Ah-zero maintenance.

Dimensions

in mm



1. Illustrations may include optional equipment & accessories and may not include all standard accessories.
2. Materials and specifications are subject to change without notice.
3. All the specifications meet relevant ISO standards.



MARKETING NETWORK

BEML LIMITED

- Corporate Office** : BEML Soudha, 23/1, 4th Main, SR Nagar, Bangalore-560 027. PH: +91-80-22963240 FAX: +91-80-22963164
Email: edc@beml.co.in; agmpr@beml.co.in
- International Division** : BEML Soudha, 23/1, 4th Main, SR Nagar, Bangalore-560 027. Ph. No. +91-80-22233350, 22222730
 Fax No. +91-80-22224874 **Email:** office@export.beml.co.in
- Marketing Division** : 5th floor, Unity Building, J C Road, Bangalore-560 002. Ph. No. +91-80-22963501/02/05, 22963507/09/10
 Fax No. +91-80-22963541 **Email:** mmoffice@sales.beml.co.in

REGIONAL OFFICES

BILASPUR :
 1/A, Sector C, Sirgitti Industrial Area, PO: Tifra,
 Bilaspur - 495 223. Ph. No. 07752-252082,
 Fax No. 07752-252065. E-mail : bilaspur@rm.beml.co.in

CHENNAI :
 Flat No. 10 & 11, Supriya Estates, Sterling Road,
 Nungambakkam Road, Chennai - 600 034
 Telefax No. 044 - 28257319 E-mail : chennai@rm.beml.co.in

HYDERABAD :
 3-6-114, Himayat Nagar, Hyderabad - 500 029.
 Ph. No. : 040-23227032, Fax No. : 040-23221794
 E-mail : hyderabad@rm.beml.co.in

KOLKATA :
 Flat No. 9, 10 & 11, 5A, Lord Sinha Road, Kolkata - 700 071.
 Ph. No. 033-22826314, Fax No. 033 - 22821033
 E-mail : kolkatta@rm.beml.co.in

MUMBAI :
 Rajmahal, 1st Floor, 84, Veer Nariman Road, Churchgate,
 Mumbai-400 020. Ph. No. : 022-22852017,
 Fax No. : 022 - 22852633. E-mail: mumbai@rm.beml.co.in

NAGPUR :
 33, Cement Road, Shivaji Nagar, Nagpur - 440 010.
 Ph. No. 0712 - 2248435, Fax No. 0712 - 2248343
 E-mail : nagpur@rm.beml.co.in

NEW DELHI :
 Flat No. E,F,G,H, 'Vandana', 11, Tolstoy Road,
 New Delhi - 110 011. Ph. No. : 011-23316500
 Fax No. 011-23325085
 E-mail : delhi@rm.beml.co.in

RANCHI :
 712C, Circular Road, Ranchi - 834 001.
 Ph. No. 0651 - 2560370, Fax No. 0651 - 2560197
 E-mail : ranchi@rm.beml.co.in

SAMBALPUR :
 BEML Complex, NH-6, Baraipalli, Sambalpur - 786 150
 Ph. No. 0663 - 2521604, Fax No. 0663 - 2521603
 E-mail : sambalpur@rm.beml.co.in

SINGRAULI :
 PB No. 5, Jhingurdha Colliery, PO : Sidhi, Singrauli - 486 889.
 Ph. No. 07805 - 266668, Fax No. 07805 - 267282
 E-mail : singrauli@rm.beml.co.in

DISTRICT OFFICES

AHMEDABAD :
 266-1, Dilbaug Villa, Darshan Society Road, Navrangpura,
 Ahmedabad - 380 009, Ph. No. 079 - 26445523,
 Fax No. 079-26423950, E-mail : ahmedabad@rm.beml.co.in

ASANSOL :
 3, Bumpur Road, Asansol - 713 304, Ph. No. 0341-2252480,
 Fax No. 03410-2250601 E-mail:asansol@rm.beml.co.in

BHILAI :
 Room No. 22/C, BSP Building, Near Ispat Bhavan,
 Bhilai - 490 001 (CG), Ph. No. 0788-2223882
 Fax No. 0788-2250055, E-mail : bhilai@rm.beml.co.in

BHUBANESWAR :
 91/A1, Shaheed Nagar, Bhubaneswar - 751 007,
 E-mail : bhubaneswar@rm.beml.co.in

CHANDRAPUR :
 Mamidwar Tiles Factory Compound, Ghugus Road,
 Padoli, Chandrapur - 442 406(MS) Ph. No. 07172-287230
 Fax No. 07172-287760, Email : chandrpur@rm.beml.co.in

DHANBAD :
 Kamal Kunj, Kola Kusuma, Saraidhela, Dhanbad - 828 127,
 Ph. No. 0326-2208982, Fax No. 0326-2200182.
 E-mail : dhanbad@rm.beml.co.in

GUWAHATI :
 RG Baruah Road, 9, Bylane (West), Thinali,
 Guwahati-781 024, Telefax No. 0361-2454696,
 E-mail:guwahati@rm.beml.co.in

HOSPET :
 No. 243, Sri Daruka Nilaya, No. 42, 1st Main Road,
 Basaveswara Badavane, Hospet-583 201(Karnataka)
 Mobile No. 09448489606

JAMMU :
 62C, Block D/C, Gandhinagar, Jammu Tawi - 180 004,
 Ph. No. 0191-2430447, Fax No. 0191-2450764
 (PP), E-mail : jammu@rm.beml.co.in

KOTHAGUDEM :
 5-25/1, Balaji Complex, Lakshmidivipalli, Kothagudem-507 101 (AP),
 Ph. No. 08744-242489, Fax No. 08744-245572,
 E-mail : kothagudem@rm.beml.co.in

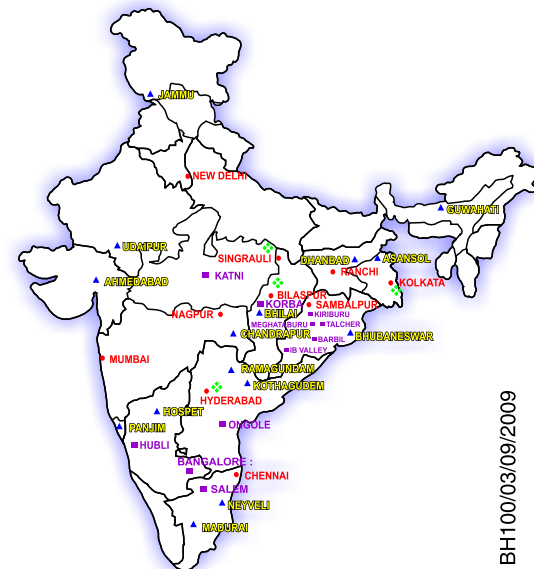
MADURAI :
 9 - 4/49, Kalai Nagar, 2nd Main Road, Madurai - 625 017.
 Tele No. 0452-2649458 / 2649125 / 2649125

NEYVELI :
 F4, Rajendra Prasad Road, Block 27, Neyveli - 607 803,
 Telefax No. 04142-268517, E-mail : neyveli@rm.beml.co.in

PANJIM :
 67-12, Dattaprasad Building, III Floor, MG Road, Panjim-403 001,
 Telefax No. 0832-2225135, E-mail : goa@rm.beml.co.in

RAMAGUNDAM :
 Opp. SCCL 11 A Mines, (PO) Jallaram, Godavari Khani - 505184,
 (via-Manthani), Karimnagar Dist (AP),
 Telefax No. 08728 - 244578, E-mail : ramagundam@rm.beml.co.in

UDAIPUR :
 No - 20 - B, Uchhab Bhavan, Bedla Road, Fatehpura,
 Udaipur - 313004, Rajasthan,
 Ph. No. 0294-2452053/2452055, Telefax No. 0294-2452054



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Form No. : BH100/03/09/2009