

BH100

REAR DUMP TRUCK

- | Reliable Performance
- | Outstanding Productivity
- | Reliability
- | Serviceability
- | Manoeuvrability
- | Comfort
- | In-built Safety
- | Total Customer Support



Max. Payload	: 91000 kg
Body Capacity	: 60 m ³
Flywheel Horse power	: 1032 hp @ 2100 rpm

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REAR DUMP TRUCK

Salient Features :

Reliable Performance

High power Cummins (India) 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 repairability 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



ENGINE

Make	Cummins
Model	QST30-C
Type	IC-Diesel, 4 stroke, turbocharged, after cooled, electronic injection, water cooled meeting EPA Tier 1
No. of cylinders	12, V-type
Bore & Stroke (mm)	Dia140 x 165
Displacement	30.5 ltrs.
Flywheel power (net)	770 kW (1032 hp)@ 2100 rpm
Maximum net torque	4787 Nm @ 1500 rpm (Meet - SAEJ1349)
Electricals	
Starting motor	24 DC, 9KW (2nos.)
Battery	4 x 12 V, 200 Ah
Alternator	24 V DC, 75 A



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	7.94 : 1
Total reduction	24.37 : 1
Travel speeds (km/h)	
Range	1st 2nd 3rd 4th 5th 6th 7th
Forward	8.59 12.09 16.28 21.92 29.51 40.28 56.43
Reverse	10.24



HYDRAULIC SYSTEM

Hydraulic Pump	
Type	2 nos. of tandem gear pump for hoisting, steering and brake oil cooling.
Capacity	1) Steering & Hoist Pumps: 511 lpm @ Engine rated 2100 rpm 2) BOC pump : 589 lpm @ engine rated 2100 rpm
Relief Pressure	
Hoist	22.07 MPa (225 kg/cm ²)
Brake oil cooler	0.735 MPa (7.5 kg/cm ²)
Hoist cylinders	Twin, 3 stage double acting, telescopic type
Body Hoist time	12 +/- 1.5 Sec.

STANDARD EQUIPMENT

GENERAL: Air dryer, air horn, vandalism protection kit, windshield washer, dump brake, right & left hand Mirror, auto fire protection system, portable fire extinguisher, tool kit, parking Brake, tiltable steering column, auto lube system, exhaust heated body, cat walk, mud flap, shift indicator, rock ejectors, cabin floor mat, safety seat belt, co-operator seat, emergency brake, fresh air fan, tow hooks front & rear, air conditioner, auto emergency steering, wheel stopper.

Battery relay, head lights, ladder light, UEC (Unified Electronic Controller) includes Pay load monitoring, vehicle monitoring system & hoist controls, alternator, key switch, wiper motor, gauge light, front brake cut-off switch, engine shut-off switch, LED lamps for turn signal, tale hazard, parking & stop lights. power windows (LH) ,ABS(Anti -lock brake system), ASR (Automatic Spin Regulator), air operated seat

GAUGES: Ammeter, voltmeter, air pressure, engine oil pressure, water temperature, transmission oil temperature, speedometer, tachometer, engine oil temperature, brake oil temperature.

ALRAM: Air pressure, water temperature, transmission oil temperature & pressure, engine oil pressure, brake oil temperature, body up & parking brake 'ON' back up alarm, radiator water level.

GUARDS: Engine & transmission belly guard, cab spill guard, drive line protector, radiator fan guard & hand rails,

OPTIONAL ATTACHMENTS: Tyre inflation kit, suspension charging kit, exhaust muffler, (non-exhaust heated body), fast fuel system, work lamp, rear view camera, body wear plate, numerical payload score board outside cabin, radio AM/FM, auto dipping system, electronic type proximity avoidance system, individual bank monitoring system for auto lube system, radial tyre (27R49), rear axle with SAHR wet multiple disc with parking brake, EPA -Tier 2 complaint engine, 160Ah sealed maintenance free battery , telescopic steering column





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)	Dia 273 x 376	dia 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)	1721	2389
Loaded (kg/cm)	9161	36601



STEERING SYSTEM

Type	Orbitrol, full hydraulic power steering
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Cylinder	
Type	Double acting, piston type
Quantity	Two
Bore x Stroke	Dia 120 mm x 430 mm
Relief pressure	21.6 Mpa (210 kg/cm ²)
Emergency steering	Electrically driven hydraulic pump & motor

Performance	
Turning radius	10.8 m
Vehicle clearance diameter	21.0 m



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).	



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.	

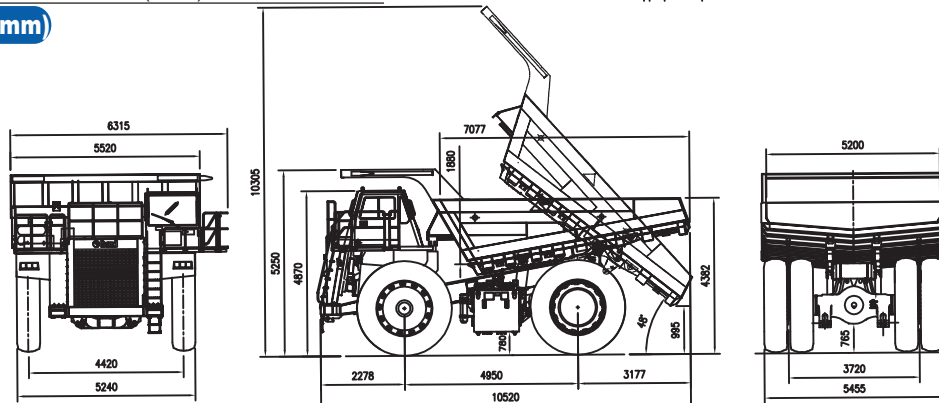


SYSTEM REFILL CAPACITIES

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: (Split type) BOC	306
Steering & Hoist	266
Air tanks	175
Suspension - Front	24 (each)
- Rear	16 (each)



DIMENSIONS (in mm)



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



BODY

Plate thickness (mm)	
Bottom plate	19
Side plate	9
Front plate	12
Target area (mm ²)	
(Length x Width x Depth) mm	7077 x 5200 x 1880
Volumetric capacity	
Struck	42.9 (m ³)
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)	



FRAME

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

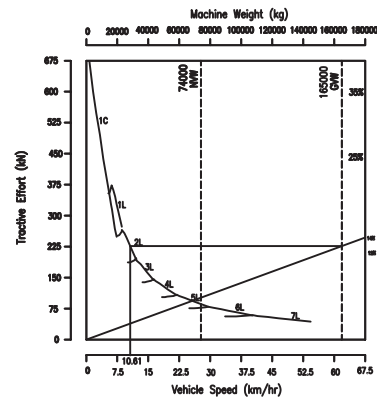
Net vehicle mass	74,000 kgs	
Rated payload	91,000 kgs	
Gross vehicle mass	1,65,000 kgs	
Mass distribution	Empty	Loaded
Front axle, kgs	34,780	54,450
	(47%)	(33%)
Rear axle, kgs	39,220	1,11,050
	(53%)	(67%)



PERFORMANCE CHART

Gradeability/Speed/Rimpull of BH100

Engine	: QST30
Axle Ratio	: 7.94:1
Total Reduction Ratio	: 24.37:1
Gross Vehicle Weight	: 165000 kg
Engine Power (Gross)	: 1082HP
Tyre Size fitted	: 27x49-48 PR



How to use this chart:

1. Enter Chart at GVW.
2. Determine Total resistance (Grade in percent plus rolling resistance).
3. Connect point on weight scale with point on total resistance scale and project it to tractive effort scale. Read required tractive effort.
4. Read horizontally from required tractive effort to intersect to appropriate speed.

BH100

**REAR DUMP
TRUCK**

TECHNICAL SPECIFICATIONS

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