

BL40

FRONT END LOADER



- High Productivity
- Increased Reliability
- Exception Manoeuverability
- Excellent Serviceability & Easy Maintenance
- Superior Operating Comfort



Bucket capacity : 4.7 cu.m.

Operating weight : 28000 kg

Net power : 224 kW (300 fhp) at 2100 rpm

www.bemlindia.com

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Salient Features :

Productivity :

High power BEML BS6D140-1 engine, rugged transmission featuring three-forward and three -reverse speeds with heavy duty planetary axle, high tractive effort and gradability in all operating conditions.

Reliability :

Attention-free wet multiple disc brakes at rear and front axle, box-type chassis constructions for uniform stress distribution Z - bar linkage assures optimum breakout force and faster cycle time.

Manoeuvrability :

Centre - point articulation with power steering optimum combination of travel speed and hydraulic cycle time, turning circle and wheel base.

Serviceability & Maintainability :

Electronic display and monitoring system helps prevent minor problems from becoming major ones, Seated loader linkage pins account for higher performance and less maintenance. Maintainability and repairability index (SAEJ817A) is lower compared with any other loader in its class.

Comfort :

Roomy walk-through cab, with ergonomically arranged feather touch control levers and instruments cushioned suspension adjustable seat. Excellent visibility ensures easy loading on dump trucks.



ENGINE

Make	BEML
Model	BS6D140-1
Type	Diesel, 4-cycle, water-cooled direct injection
Aspiration	Turbocharged
Number of Cylinders	6
Bore & Stroke	ø 140 x 165 mm
Piston displacement	15.2 ltrs.
Compression ratio	15.0:1
Net power	224 kW (300 fhp) at 2100 rpm
Maximum torque	127.2 kgm @ 1400 rpm
Governor	Mechanical
Lubrication system	Forced lubrication, gear pump
Air cleaner	Dry type
Cooling system	Radiator, continuous finned flat tube, deaeration type top tank
Electricals	
Alternator	24V, 100A
Starting motor	24V, 7.5 kW
Battery	2 x 12V, 200 Ah



TRANSMISSION

Torque converter	3-Element single stage	
Stall torque ratio	3.23:1	
Transmission	Full powershift planetary gear type 3 forward, 3 reverse	
Speed (Kmph)	Forward	Reverse
	6.67	6.4
	12.9	12.57
	24.75	23.72



STEERING

Type	Centre pivot frame articulation	
Steering mechanism	Full hydraulic power steering system, independent of engine speed	
Steering pump	Gear pump	
Capacity	193 lpm @ 2100 rpm	
Steering angle	Wide articulation of 35° on each side	
Turning radius	8900 mm	
Steering cylinder	Two, double acting type	
Dia & Stroke	ø 110 x 547.5 mm	
Relief pressure setting	175 kg/cm ² (17.17 MPa)	



BRAKES

Service Brake	4-Wheel, enclosed, air over hydraulically actuated outboard mounted wet disc brakes, independent front & rear brake line
Parking brake	Dry disc type applied on intermediate shaft
Emergency brake	Automatically actuates when air pressure goes below the rated value.

STANDARD EQUIPMENT

Engine : Starter, Alternator
Electrical Lights : Front Working Lights (2), Headlights (2), Rear working lights (2).
Brake Lamp & Tail Lamp : Turn indicators (Front & Rear)
GAUGES : Fuel level, Engine oil pressure, Coolant temp, Ammeter, T/C oil temp. Air pressure, RPM Meter, Hour Meter.
PILOT LAMPS : High beam, Parking brake applied, Turn indicators
CAUTION LAMPS : Battery charging, Trans oil pressure, Engine Oil Pressure, Engine Water Temp. Air Pressure
OTHERS : Sight gauges, Dust indicators, Emergency brake, Bucket positioner, Boom kickout, General purpose bucket (4.7 cu.m) Suspension seat, Front tender, Floor Mat, Sun visor, ROPS Cab Fire Extinguisher 5 kg Rear View Mirror, Fan, Seat Belt, Back-up Alarm, Wind Shield Wiper and washer.

OPTIONAL ATTACHMENTS

Steel Cabin	Heater and defroster
Canopy	Tyre inflation kit
Air Conditioner	Pre Heater



TYRES

Front & rear 29.5 x 29-28 PR (L-3)

HYDRAULICS

Main Pump	Tandem gear pump
Capacity	410 lpm @ 2100 rpm
Relief pressure	210 kg/cm ² (20.6 MPa)
Lift cylinder (Boom)	Two, double acting type
Bore x Stroke	∅ 200 x 805 mm
Tilt cylinder	One, double acting type
Bore x Stroke	∅ 225 x 526 mm

Hydraulic cycle time

Raise	6.6 sec
Dump	1.5 sec
Lower	4.0 sec

COOLANT & LUBRICANT REFILL CAPACITY

System	Litres
Engine oil pan	34
Fuel tank	445
Cooling system	80
Brake oil tank	1.5
Hydraulic system	181
Front axle	59
Rear axle	59
Transmission & Torque converter	62

BUCKET CONTROLS

Pilot operated hydraulics required little effort to operate the bucket and boom control lever assuring responsive boom and bucket action. Automatic boom kickout adjustable from horizontal to full lift and automatic bucket positioner adjustable to desired loading angle. No visual spotting required.

Control Positions

Lift arm - Raise, hold, lower and float
Bucket - Tiltback, hold and dump

TURNING RADIUS & ANGLES

Clearance radius for inner tyre	4350 mm
Clearance radius for outer tyre	7750 mm
Vehicle clearance radius	8900 mm
Steering angle	35°
Departure angle	25°
Ramp angle	140°
Approach angle	74°

BUCKET RANGE

BUCKET TYPE			BOLT - ON - TEETH		
# Bucket capacity	SAE rated	Cu.m.	HEAVY DUTY	EXCAVATION	STANDARD
	Struck	Cu. m	2.8	4.0	4.7
			2.3	3.4	4.0
Bucket Mass		kg	1360	1800	2050
Static tipping load	Straight	kg	20100	19491	19085
	Full turn	kg	18600	18000	17600
Breakout force (bucket cylinder)		kg	27400	26630	24700
Operating Mass		kg	28640	28550	28800
Bucket width		mm	3380	3510	3510
Dumping clearance, max. height and 45° dump angle		(A) mm	3475	3330	3265
Reach at 2130 mm (7') cut edge clearance and 45° dump angle		(B) mm	2050	2100	2160
Reach at max. height 45° dump		(C) mm	1305	1445	1520
Operating height (fully raised)		(D) mm	5750	5895	6095
Overall length		(E) mm	8890	9085	9185

Optional Bucket of 5.0 cum (Light duty) and 6 cum (Extra light duty) capacities are also available.

All dimensions, weights and performance values based on SAE-J732c and J742b standard. Static tipping load and operating weight shown includes lubricants, coolant, full fuel tank, cabin and operator.

Machine stability and opening weight are affected by counter weight and other attachments.

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

OPERATING MASS

Operating mass, including rated capacity of lubricants, coolant, fuel, 29.5 x 29-28 PR tyres. 4.7 cu. m SAE heaped capacity bucket 28,000 kg.

CABIN

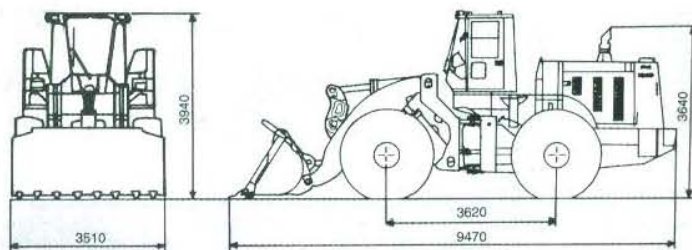
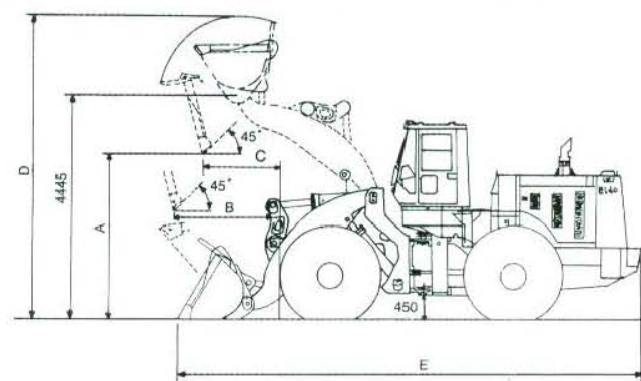
The "WALK THROUGH" cab has doors on both sides making it easier to park, enter and exit, in confined space, and is rubber mounted seated to reduce vibration and sound levels.

LIFT ARM CONTROL

Z-Bar linkage for high breakout force and easy digging through material. Sealed loader linkage pins with dust seals extend greasing intervals.

AXLES & FINAL DRIVE

Drive system	4 Wheel drive
Front and rear axle	Full floating type
Reduction and differential gear	Spiral bevel gear reduction
Final drive	Planetary gear
Oscillation angle	± 15° (Total 30°)
Wheel tread	2500 mm



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FRONTEND
LOADER

TECHNICAL SPECIFICATIONS

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