

# BE200

**HYDRAULIC EXCAVATOR**

- Efficient Hydraulic System
- Powerful Economical Engine
- Effort-free Operation
- Operator Comfort
- Serviceability



Operating Mass	: 20,000 kg
Net Power (FHP)	: 96 kW (128 hp) @ 2000 rpm
Bucket capacity	: 0.96 m <sup>3</sup>

# BE200

## HYDRAULIC EXCAVATOR

### Salient Features :

#### Efficient Hydraulic System

Rugged and efficient, two mode Closed Center Load Sensing hydraulic system with boom, arm and swing priority, boom/arm regeneration ensures high productivity, digging capacity maneuvering precision and good fuel economy with optimum combination of speed and power.

#### Powerful Economic Engine

Six cylinder turbo charged BEML engine built for power, reliability and economy designed especially for excavator application provides good fuel economy and long service life.

#### Effort free operation

Hydraulically assisted simple feather touch ergonomically designed controls ensure precise control reducing operator fatigue, improving operator efficiency which results in enhanced performance.

#### Operator comfort

Specially designed cabin using steel tubing for improved resistance to fatigue and vibration provides a quiet and spacious working environment, excellent visibility, ergonomic control panel, operator seat and a new compact LCD monitor for displaying equipment parameters. Remote location of hydraulic tank away from the cabin prevents heating up of the cabin enhancing operator comfort & productivity

#### Structures

Designed for maximum durability and efficient use of materials provide excellent service life and stability.

#### Serviceability:

Simplified service and maintenance features provide easy access to service locations at ground level for quick & efficient maintenance.



### ENGINE

Make	BEML
Model	BS6D105
Type	Diesel, 4 Stroke, Water cooled Direct Injection, Turbocharged
Net Power (FHP)	96 kW (128 hp) @ 2000 rpm
Maximum torque	54 ~ 55 Kgfm @ 1500 rpm
Number of Cylinders	6, inline
Bore & stroke	φ 105 mm x 125 mm
Total Displacement	6.494 ℓ

#### Electrical

Alternator	24V / 45A
Starting Motor	24 V / 5.5kW
Battery	2 x 12V, 120 Ah



### HYDRAULIC SYSTEM

#### SYSTEM CAPACITY (LITRES): 210

No. of modes : 2 (Standard & Light duty)

Hydraulic pumps	
Main	Type Variable displacement axial piston pump
	Oil flow 2 x 205 ℓ pm at rated rpm

#### Hydraulic motors

Travel	2 Nos. of two speed axial piston motors with built in counter balance valves
Swing	1 No. axial piston motor

#### Control valves

Type	Main Compact pilot operated load sensing type 5 spool valve
	Swing In-built in swing drive

Relief valve	Work attachment	325
Settings (kg/cm <sup>2</sup> )	(Boom/Arm/Bucket)	
	Swing circuit	250
	Travel circuit	325

#### Hydraulic Cylinders

Type	Qty.	Double acting piston Bore x stroke (mm)
Boom	2	120 x 1285
Arm	1	130 x 1585
Bucket	1	120 x 1115



### SWING SYSTEM

Type	Planetary gear reduction with built-in automatic brake for swing lock.
Max. Swing speed	12 rpm
Swing circle	Internal gear & pinion, immersed in grease
Tail swing radius	2760 mm



### MASS (kg)

Operating mass (Approximate)	20,000 [Including Boom (5700 mm) Std Arm (2410 mm), Std. Bucket (0.96 m <sup>3</sup> , SAE heaped), operator, lubricant, coolant filled fuel tank & hyd. tank]
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### STANDARD EQUIPMENT

Boom (5700 mm), Std. arm (2410 mm), Std bucket (0.96 m<sup>3</sup>), SAE heaped), Starting motor, Alternator, Batteries, Suction type fan, Dry type air cleaner, Load sensing hydraulic system, 500 mm triple grouser shoes, Hydraulic track adjuster, Counter weight, Hydrostatic drives, Pilot pressure controls. All weather steel cabin (with safety glass windows, Lockable door, Electric horn, Cabin lamp and Adjustable seat with reclining device), Rear view mirror, Front light & Tool kit.

#### Indicators / Alarm / Gauges

Indicators for alternator charge	Alarm for low engine oil pressure.
Digital display of fuel level	Hour meter
Water temperature and sight gauge for Hydraulic oil level	

#### OPTIONAL

Air conditioner, Front cab guard, FOPS, 600 mm shoe, Rock Breaker, Log Grappler, Hard Face Bucket, Heavy Duty Bucket (0.72 cum).





## DRIVES AND BRAKES

Drive type	Hydrostatic with axial piston motor and planetary reduction gear box for each track.
Travel and steering	Forward / reverse travel and steering actuated with either hand levers or foot pedals. Independent drive to each track enables machine to make a pivot turn in either direction.
Max. draw bar pull	16,000 kg
Travel speed	3.5 km/h
Counter balance valve	Counter balance valve fitted on each hydraulic motor acts as hydraulic brake. This also prevents possible over speeding in down gradient.
Brakes	Oil disc type, spring applied hydraulically released brakes. The brakes are released when pedals are operated for travel.



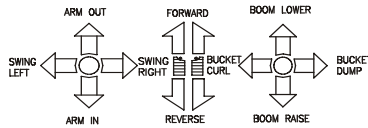
## UNDERCARRIAGE

Track frame	Sturdy X-bar type centre frame is integrally welded with reinforced box sections
Track shoe width (Std)	500 mm
No. of shoes on each side	45 (Triple Grouser)
No. of Carrier roller on each side	2
No. of track rollers on each side	7
Grouser height	26 mm
Ground pressure (kg/cm <sup>2</sup> )	0.43



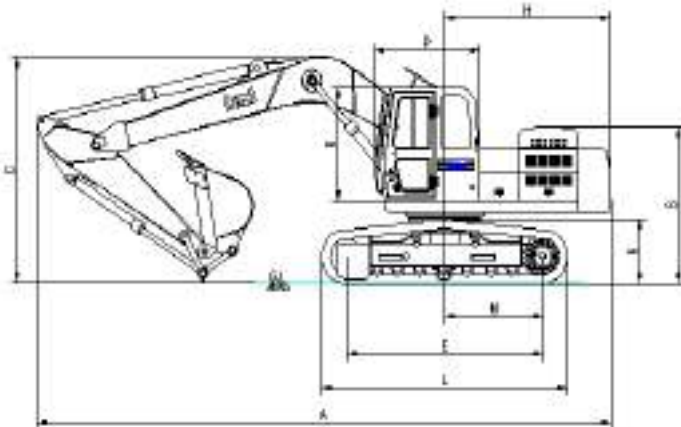
## CONTROLS

Work attachment	Feather touch joy stick pilot controls with accumulator system for smooth safe operation
Travel	Two foot pedals cum hand levers operated pilot control valves for forward / reverse travel and steering



## DIMENSIONS (mm)

A-Overall length / B-Width	9570 / 2770
C-Overall ht. - Top of boom / D-Cab	3375 / 2940
E-Track length on ground / K - Height	3270 / 970
F-Track gauge / T - Width	2200 / 500
G-Min ground clearance / J-Cwt	440 / 1080
H-Tail swing radius	2765
L-Crawler overall length	4080
M-Spocket axis to axis of rotation	1635
N-Cabwidth / P - length / R - height	940 / 1760 / 1700
S-Height upto engine hood	2350



## REFILL CAPACITY (Coolant & Lubricant)

System	Capacity (litres)
Fuel Tank	280
Radiator	25
Engine	17.5
Final Drive each side	3.5
Hydraulic Tank	160



## FILTER SYSTEM

Engine	
Lub Oil	Paper type
Fuel	Pre and micro
Air	Double element dry type with turbo pre cleaner
Hydraulic system	Return line filter



## SAFETY

- ◆ Built-in swing brake ensure safety during long distance travel and transportation.
- ◆ Horn
- ◆ Automatic parking brake
- ◆ Relief valves and safety valves for hydraulic system protection.
- ◆ Counter balance valves in travel motors to avoid possible over speeding in down gradients.
- ◆ Accumulator in pilot line to bring down the work attachment to a safer position in the absence of engine power.
- ◆ Hydraulic filters for protection of hydraulic system against oil contamination.
- ◆ Hydraulic safety levers for locking hydraulic system controls.



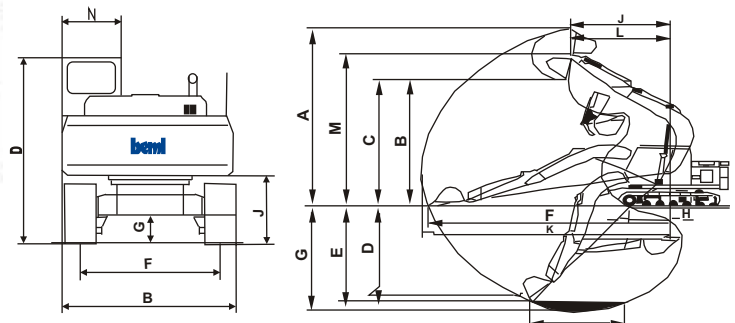
## BACKHOE BUCKETS

Bucket capacity (m <sup>3</sup> ) (SAE heaped)	0.96
<b>Bucket width (mm)</b>	
Without side cutters	1045
With side cutters	1145
<b>Bucket weight (kg)</b>	
Without side Cutters	626
With Side cutters	656
No. of Bucket teeth	4



## WORKING RANGE (in mm)

Description	Std. Arm (2410)
A. Max. digging height	9090
B. Max. dumping height	6258
C. Max. bucket loading clearance	6520
D. Max. Vertical wall digging depth	4233
E. Max. digging depth of cut for 2440 mm level bottom	5807
F. Max. digging reach at ground level	9290
G. Max. digging depth	6140
H. Min. reach at ground reference plane	1890
J. Reach at Max. height	6110
K. Max. reach	9480
L. Reach to bucket pin center at Max. ht.	5175
M. Max. bucket hinge pin height	7830
<b>FORCES kN (Kgf)</b>	
Bucket digging force	115.6 (11,795)
Arm crowd force	105.2 (10,735)



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

**BE200**

**HYDRAULIC  
EXCAVATOR**

**TECHNICAL SPECIFICATIONS**

# बी ई एम एल लिमिटेड

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A Govt. of India Miniratna Company Under Ministry of Defence

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# बी ई एम एल लिमिटेड

## BEML LIMITED

A Govt. of India Miniratna Company Under Ministry of Defence

Hydraulic Excavators  
From BEML:

BE75

BE200

BE220

BE240HD

BE300LC

BE450LC

BE700

BE700E

BE1000

BE1000E

BE1250

BE1600

BE1800E