

BE700

HYDRAULIC EXCAVATOR

- | Efficient Hydraulic System Design
- | Powerful, Economical Engine
- | Effort-free operation
- | Maximum Working Performance
- | High Total Reliability and Durability
- | Easy Maintenance
- | Operator Comfort



LOADING SHOVEL

Flywheel Horsepower	: 309 kW (415 hp) @1800 rpm
Operating Mass	: 70000 kg
Bucket Capacity	: 4.5 m³ STD
(SAE Heaped)	: (3.1, 3.8, 4.2, 5.0m³ Optional)

BACKHOE

Flywheel Horsepower	: 309 kW (415 hp) @1800 rpm
Operating Mass	: 69500 kg
Bucket Capacity	: 4.0 m³STD
(SAE Heaped)	(2.4, 2.8, 3.3, 3.5, 4.5m³Optional)



BE700 HYDRAULIC EXCAVATOR

Salient Features :

Efficient Hydraulic System Design:

Three pump hydraulic systems which consists of independently controlled variable capacity axial piston pumps for implements and closed loop swing, not only assures smooth compound movements of the work equipment, but also shortens cycle time. The open center load sensing, two loop positive control hydraulic system makes optimum use of engine power output, there by reducing hydraulic loss during operations.

Powerful, Economical Engine :

BEML BSA6D140-1 diesel engine delivers 415 HP. A direct injection combustion system and the power-efficient Positive control hydraulic system make the BE700 a real miser when it comes to fuel consumption.

Effort-free operation :

Work equipment controls are simple and feather-touch due to the hydraulically assisted control system.

Maximum Working Performance :

Three mode selection system viz. Electronic Standard and Medium-duty modes S&L for high excavation efficiency and non electronic mode M for light-duty operations. Swing holding brake facilitates smooth lifting operation on an incline. The positive control and closed loop swing system gives maximum hydraulic efficiency. The auto boom float and regeneration reduces the fuel consumption and avoid cavitations. The Boom, Arm and Bucket merge circuits and smooth compound travel and work equipment movement boosts productivity. Wide working range and larger undercarriage assures stable operation for maximum working performance.

High Total Reliability and Durability :

Grease bathed swing pinion, sealed hinge pins on all joint section, floating seals on all rollers, tough undercarriages use job-proven bulldozer components. The BEML quality controls system is a real winner of the reliable and durable BE700.

Easy Maintenance :

With a centralized monitoring system within the operator's cab, the operator can instantly check machine conditions. The top cover of the machine cab can be opened easily with the aid of a torsion bar, allowing quick access to internal components. Centralized grease points for the work equipment makes lubrication easy with grease gun.

Operator Comfort :

Newly designed operator's compartment offers ample work space and excellent visibility.



ENGINE

Make	BEML
Model	BSA6D140-EG
Type	Diesel, 4-stroke, Water cooled Turbo charged, After cooled Direct injection
No. of cylinders	6
Bore & Stroke	ø140 x 165 mm
Displacement	15, 246 cc
Net power	309 kW (415 FHP) @ 1800 rpm
Max. torque	184 kg - m @ 1400 rpm
Electricals	
Alternator	24 V, 100 V
Starting Motor	24 V, 7.5 kW
Battery	2 x 12 V, 200 Ah



HYDRAULIC SYSTEM

Hydraulic pump			
Type	Implements Variable Capacity piston pumps with positive controls	Swing Variable Capacity piston pump for closed loop	Pilot + PTO lub. Tandem gear pump
Capacity	2x420 lpm	1x390 lpm	1x50+1x28 lpm
Hydraulic Motors			
Travel	4 nos. axial piston variable displacement motors with counter balance valve (two each side)		
Swing	1 no. axial piston fixed displacement motor with flushing valve for closed loop.		
Control valves	Main control valve one number with 8 spools of 32 dia. and single spool valve with carry over port for optional attachment.		
Operating pressure			
Implements	320 kg/cm ² (31.38 MPa)		
Travel circuits	275 kg/cm ² (26.96 MPa)		
Swing circuit	300 kg/cm ² (29.42 MPa)		
Pilot circuit	35 kg/cm ² (3.43 MPa)		
Hydraulic cylinders			
Type	Double acting piston		
Attachment	Qty - Bore x Rod -stroke in mm		
	Backhoe	Loading shovel	
Boom	2-ø200 x ø140-1892	2-ø180 x ø 120-1490	
Arm	1-ø200 x ø140-2250	1-ø225 x ø 160-1530	
Bucket	1-ø180 x ø130-1540	2-ø180 x ø 130-1300	
BTD Dump	ø140 x ø130-1540	2-ø140 x ø 90-335	

STANDARD EQUIPMENT

Starting motor, Alternator, Dry type air cleaner, PPC hydraulic controls, OLSS hydraulic system with positive control, 610mm double grouser shoes, hydraulic track adjusters with shock absorbing cylinders.

Fully hydrostatic drive, suction fan, batteries, front light, bolt on sprocket, 8700 kg counter weight, all weather steel cab, (with safety glass window, lockable door, windshield wiper, electric horn, room lamp, and adjustable seat with reclining device) monitoring system, tool kit, rear view mirror, ash tray, portable fire extinguisher, cabin fan and FOPS guard.

BACKHOE : One piece Boom (7.1 m), Arm (2.87 m), Backhoe Bucket 4.0 m³ (SAE heaped)

LOADING SHOVEL : One piece Boom (4.6 m), Arm (3.4m), Bottom Dump Bucket 4.5m³ (SAE Heaped).

OPTIONAL ACCESSORIES

Front windshield protective guard, windshield washer, air conditioner, heater, Injector type auto lubrication system, vandalism protection cap, high mount cab, DCP type Auto Fire Protection system.

BACKHOE : Booms 8.4m, Arms of 3.6m, 5.1m
Bucket of 2.4m³, 2.8m³, 3.5m³, 4.5m³.

Loading Shovel : Front dump type bucket 3.1m³, 3.8m³
Bottom dump type buckets of 3.8m³, 4.2m³, 5.0m³.





DRIVES

BRAKES

SWING SYSTEM

UNDER CARRIAGE

OPERATING WEIGHT

WORKING RANGE

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



INDICATORS / ALARMS / GAUGES

CABIN

DIMENSIONS (in meters)

The technical drawings show the 1000 Series 20' container chassis from two perspectives: side elevation (top) and front elevation (bottom). Both views include detailed dimensions for height, width, and specific structural features.

Side Elevation Dimensions:

- Overall height: 5050
- Overall width: 9540
- Distance from front to rear axle: 4020
- Radius: $R=4100$
- Height from ground line (G.L.) to top of chassis: 3620
- Height from G.L. to top of chassis (alternative measurement): 3555
- Height from G.L. to top of chassis (alternative measurement): 3600
- Height from G.L. to top of chassis (alternative measurement): 3707
- Height from G.L. to top of chassis (alternative measurement): 3280
- Height from G.L. to top of chassis (alternative measurement): 1630
- Height from G.L. to top of chassis (alternative measurement): 940
- Height from G.L. to top of chassis (alternative measurement): 880
- Height from G.L. to top of chassis (alternative measurement): 1420
- Height from G.L. to top of chassis (alternative measurement): 610
- Height from G.L. to top of chassis (alternative measurement): 3910
- Height from G.L. to top of chassis (alternative measurement): 3300
- Height from G.L. to top of chassis (alternative measurement): 18.5
- Height from G.L. to top of chassis (alternative measurement): 4500

Front Elevation Dimensions:

- Overall height: 5084
- Overall width: 12886
- Distance from front to rear axle: 4020
- Radius: $R=4100$
- Height from ground line (G.L.) to top of chassis: 3620
- Height from G.L. to top of chassis (alternative measurement): 1550
- Height from G.L. to top of chassis (alternative measurement): 3600
- Height from G.L. to top of chassis (alternative measurement): 3707
- Height from G.L. to top of chassis (alternative measurement): 3280
- Height from G.L. to top of chassis (alternative measurement): 1630
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- Height from G.L. to top of chassis (alternative measurement): 18.5
- Height from G.L. to top of chassis (alternative measurement): 4500



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Figure 1

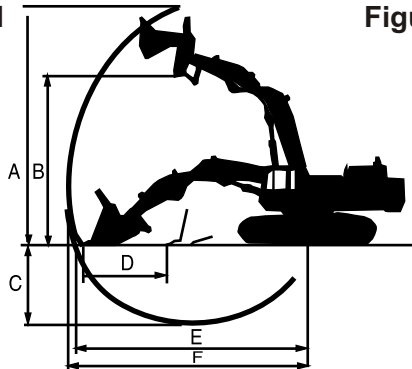
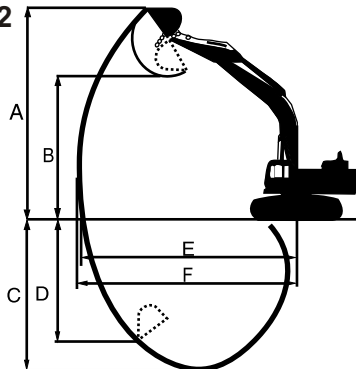


Figure 2



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