

CRAWLER DOZER

BD80



BEML BS6D125-1 Engine

Direct - Injection system for high fuel efficiency and for cleaner exhaust, at high altitude



Smooth Operation

Wet type main clutch hydraulically boosted and hand controlled for light touch and smooth operation.



Flywheel Power (FHP):

Standard : 134 kW (180 HP) @ 1850 rpm

Operating Mass : 21,550 Kg
(With Angle Dozer)



Drive:

- Direct Drive - Helical Gear
- Constant Mesh - Hand Operated

1 Salient Features

- BEML BS6D125-1 Direct injection type diesel engine for sustained power and economy.
- Sturdy box type construction Main frame designed to with stand shocks and stresses of heavy dozer work.
- Hydraulically actuated, oil cooled main clutch
- Heavy duty, constant mesh transmission with helical gears.
- Hydraulically actuated, self-adjusting oil cooled steering clutches for long life. Steering brakes are also oil cooled.
- Hydraulically controlled dozer blade with fully ribbed mould board.
- Floating - seals in all rollers, idlers and sprockets.
- Special dust seals for prevention of abrasive dirt entry into the pin and link bushing clearances which ensures longer track services.

2 Power Line

ENGINE

Make : BEML
 Model : BS6D125-1
 Type : Water cooled 4 cycle, Turbo charged, Direct injection diesel engine.

No. of Cylinders : 6, inline
 Bore x Stroke : Ø 125 x 150 mm
 Displacement : 0.01100m³ (11.00 l)

Horse Power

Rated bhp : 143 kW (192 hp) @ 1850 rpm
 Fly wheel power : 134 kW (180 hp) @ 1850 rpm
 in accordance with IS:13116/ISO:9249
 Maximum torque : 784.8 Nm @ 1100 rpm

Fuel System

Type : Bosch Inline FIP
 Governor : Mechanical, all speed control

Lubrication System

Method : Forced lubrication
 Pump : Gear pump
 Filter : Full flow
 Oil Cooler : Water cooled

Cooling System

Type : Centrifugal water pump pusher type fan

Air Cleaner

Type : Dry, horizontal
 Alternator : 24 V, 55 A
 Starting motor : 24 V, 7.5 kW
 Battery : 2 x 12 V, 200 Ah

FINAL DRIVE

Type : Spur gear, double reduction
 Reduction ratio : 17.187
 Gear Shift : 5 Forward, 4 Reverse

Travel Speeds m/s (km/h)

Range	Forward	Drawbar Pull (Kg)	Reverse
1 st	0-0.70 (0-2.40)	17,250	0-0.87 (0-3.1)
2 nd	0-0.95 (0-3.40)	12,180	0-1.26 (0-4.5)
3 rd	0-1.45 (0-5.20)	7,960	0-1.87 (0-6.7)
4 th	0-2.07 (0-7.40)	5,600	0-2.69 (0-9.6)
5 th	0-2.80 (0-10.0)	4,160	

POWER TRAIN

Transmission : Direct drive

Main Clutch

Type : Wet, multiple disc over center engagement, hand operated with inertia brake and hydraulic booster

Transmission

Make : BEML
 Type : Helical gear, Constant mesh, Hand operated
 Bevel gear : Spiral type, single reduction

3 Dozer Attachment

DOZER ATTACHMENT

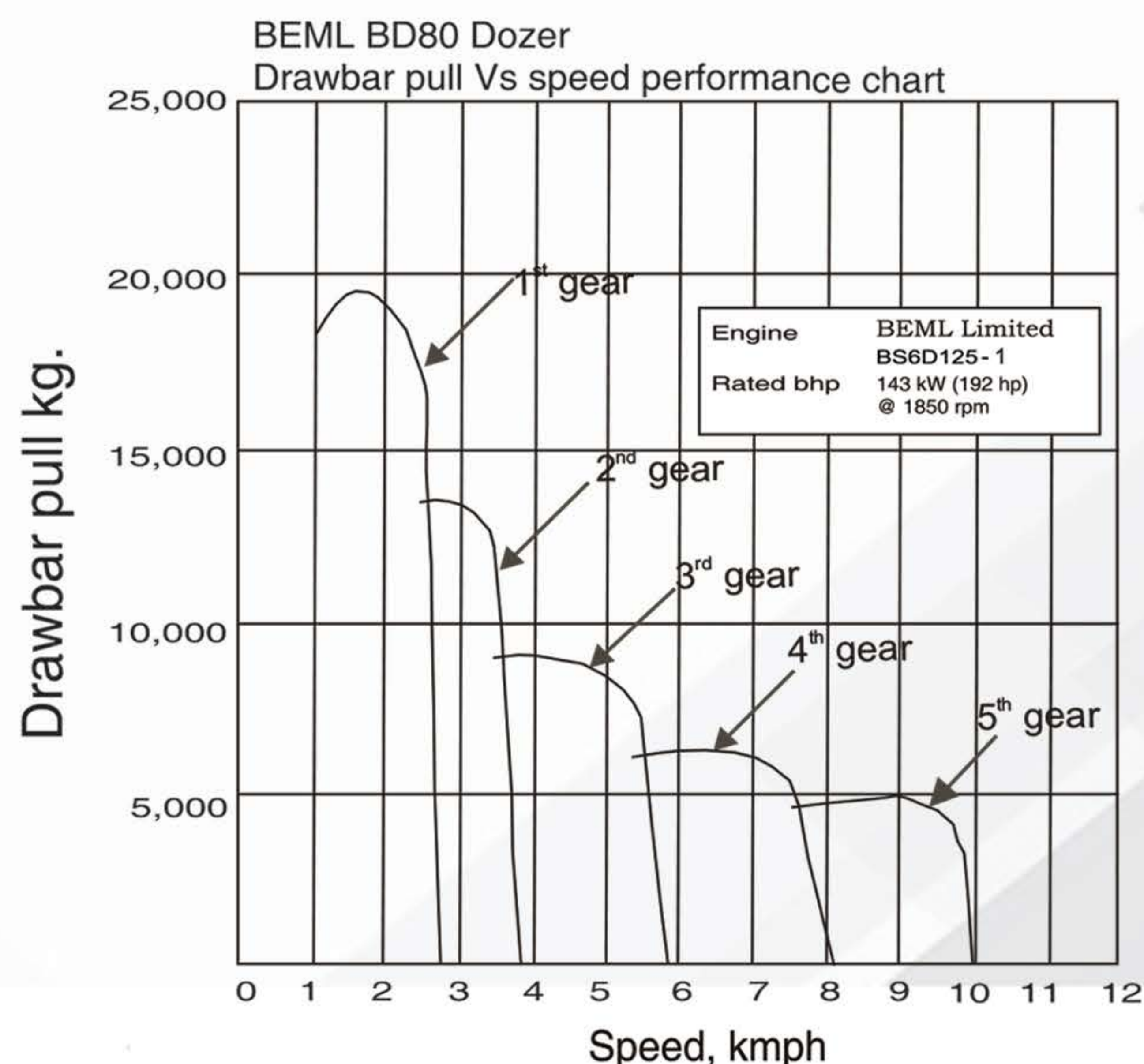
Dozer type	Angle	Straight Tilt	Coal
Overall length with dozer(mm)	5890	5660	6000
Blade length x height (mm)	4260 x 1080	3460 x 1280	4450 x 1540
Max. lift above ground (mm)	1260	1175	1275
Max. drop below ground (mm)	530	610	535
Max. tilt adjustment (mm)	500	735	*
Blade Capacity (Cu.m)	3.55	4.10	10.10
Additional ground pressure (kg/cm ²)	0.13	0.11	0.13
Mass (kg)			
Blade	3470	2880	3540
Hydraulic Control Unit	450	450	450

* Tilt cylinder for coal dozer is optional

UNDER CARRIAGE

Suspension : Semi-rigid equalizer bar type
 Track frame : Box section, High tensile strength steel construction
 Track rollers : 6 Nos. each side
 Carrier rollers : 2 Nos. each side
 Track shoes
 Type : Single Grouser
 Grouser height : 65 mm
 Shoe width : 560 mm
 No. of shoes : 38 nos. on each side
 Ground pressure (Tractor only) : 0.58 kg/cm²
 Ground contact area : 30,576 cm²

DRAWBAR PULL VS TRAVEL SPEED



Note : Usable drawbar pull will depend upon the traction and weight of the equipped tractor.

4 Hydraulic System

■ HYDRAULICS

Hydraulic Pump

Type : Gear pump
Capacity : 269 l / min @ 1850 r/min
Relief pressure : 13.73 Mpa (140 kg/cm²)

Hydraulic Cylinders

Type : Double acting piston
Blade lift : 2 cylinders
Bore x Stroke : Ø 120 x 1034 mm

■ COOLANT AND LUBRICANT CAPACITY (REFILL)

Systems (Refilling)	Capacity (Liters)
Crank case	32
Fuel Tank	420
Cooling System	65
Transmission (including steering system)	75
Final drive (each side)	36
Hydraulic tank	105
Main clutch	25

5 Drive

■ STEERING

Type : Wet, multiple disc hydraulic, together with spring type booster
Control : Hand operated with back - up booster

■ OPERATING MASS

Operating mass : 17,630 kg - Tractor only
(Including rated capacity of lubricant, coolant and fuel)

■ BRAKES

Type : Wet, Contracting band
Control : Foot operated supported by efficient linkages for light touch actuation.

6 Features

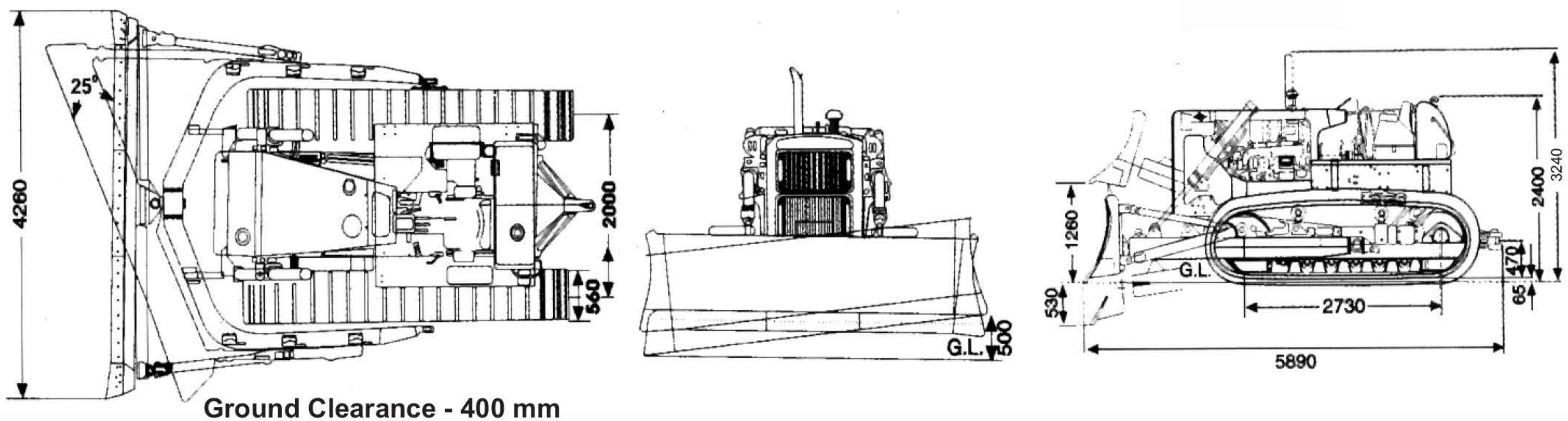
■ STANDARD EQUIPMENT

24 V, 55 A Alternator
Light switch - Warning lamp - Head lamps & rear lamp
Tool kit - Canvas canopy - Angle Dozer attachment.
Water temperature gauge - Engine oil pressure gauge
High water temperature Indicator - Low engine oil pressure indicator, Tachometer, hour meter, LCD Display Unit

■ OPTIONAL ATTACHMENTS

Steel Cabin
Steel top canopy
Rake dozer straight
Straight Dozer
Straight Tilt Dozer
Multi Shank Ripper
Coal Dozer
Dozer for steel mill
Pusher plate
Towing winch
Drawbar fixed type
Track shoe of width 610 mm
Track shoe of width 660 mm
Preheater

7 Dimensions (mm)



8 Crawler Dozer Range

■ CONSTRUCTION EQUIPMENT

BD50



BD65-1



BD80



BD85



■ MINING EQUIPMENT

BD155



BD355



बी ई एम एल लिमिटेड BEML LIMITED

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