

# BD50

CRAWLER DOZER



## Salient Features :

- Turbo Charged BEML BS6D105-1 Engine
- Spur gear, double reduction Transmission
- Wet clutch steering & brake
- Groove-type Floating Seals



Flywheel horsepower (net) : 67kW (90hp) @ 1750 rpm

Operating mass : 12170 kg  
(with Angle Dozer)

# BD50

[www.bemlindia.in](http://www.bemlindia.in)

# BD50

## CRAWLER DOZER

### Salient Features :

- Diesel Engine : Turbo-charged, Direct-injection system for high fuel efficiency and for cleaner exhaust. Can work up to 4500m altitude without fuel adjustment.
- Main frame and steering case welded into a rigid monoblock construction.
- Wet type main clutch hydraulically boosted and foot controlled for light touch and smooth operation.
- Unit construction of engine, clutch and transmission assemblies for quicker and easier servicing and overhaul.
- Reduced maintenance time and costs as well as extended serviceability of undercarriage assured with floating seals in oil filled rollers, sprockets and idlers.
- Dust seals located between link bushing and pin prevent entry of abrasive dirt or mud and ensure long track life.



### ENGINE

Make	BEML
Model	BS6D 105-1
Type	Water cooled, 4 cycle turbo charged, direct injection diesel engine
No. of Cylinders	6, inline
Bore x Stroke	ø 105 x 125 mm
Displacement	6490 cc
<b>Horse Power</b>	
Gross Power	74.5 kW (100 hp) @ 1750 rpm
Flywheel power	67 kW (90hp) @ 1750 rpm in accordance with IS : 13116 / ISO : 9249
Maximum torque	47.5 kg-m @ 1100 rpm
<b>Fuel System</b>	
Type	Bosch inline FIP
Governor	Mechanical, all speed control
<b>Lubrication system</b>	
Method	Forced lubrication
Pump	Gear pump
Filter	Spin-on cartridge paper element
Oil Cooler	Water cooled
<b>Cooling system</b>	
Type	Centrifugal water pump, pusher type fan
<b>Air Cleaner</b>	
Type	Dry, horizontal type
<b>Electricals</b>	
Alternator	24 V, 45 A
Starting motor	24 V, 7.5 kW
Battery	2 x 12 V, 150 Ah



### POWER TRAIN

Transmission			
Type	Direct drive		
Main Clutch Type	Wet, double disc spring type with inertia brake foot operated and hydraulic booster.		
Transmission Type	Spur gear, selective sliding, splash lubricated and hand operated.		
Final Drive			
Type	Spur gear, double reduction		
Reduction ratio	10.07		
Gear Shift	4 forward, 3 reverse		
Travel speeds		m/sec (km/h)	
Range	Forward	Drawbarpull (kg)	Reverse
1st	0 - 0.9(0-2.5)	8280	0-0.89(0-3.2)
2nd	0 - 0.98(0-3.5)	5920	0-1.45(0-5.2)
3rd	0 - 1.54(0-5.5)	3770	0-2.24(0-8.0)
4th	0 - 2.63(0-9.4)	2210	

### STANDARD ACCESSORIES

Tachohourmeter	Key switch
Voltmeter	Back - up switch
Engine Oil Pressure Gauge	High water temperature indicator
Water temperature guage	Light switch
Head lamps & rear lamp	Low engine oil pressure indicator
Charger indicator	4st relay, battery relay
Back - up alarm	Tool kit
24 V, (12 V x 2) 150 Ah batteries	Canvas Canopy
Angle Dozer attachment	

### OPTIONAL ATTACHMENTS

Rake Dozer	Heater with Defroster
Reduced width blade	Multi - shank ripper
Drawbar (fixed type)	Cold start kit
500 mm shoe	FOPS Steel Cabin (400 Kg.)



## HYDRAULIC SYSTEM

### Hydraulic Pump

Type	Gear pump
Capacity	170 ℓ / min @ 1750 rpm
Relief pressure	140 kg / cm <sup>2</sup>

### Hydraulic Cylinders

Type	Double acting piston
Blade lift	2 cylinders
Bore x Stroke	∅ 90 x 883 mm



## UNDER CARRIAGE

Suspension	Semi - rigid equalizer bar type
Track Frame	Box section, high tensile strength steel construction
Track Rollers	5 No. each side
Carrier Rollers	2 No. each side

### Track Shoes

Type	Single grouser
Grouser Height	50 mm
Shoe width	400 mm
No. of shoes	38 on each side
Ground pressure	0.73 kg / cm <sup>2</sup>
Ground contact area	16,700 cm <sup>2</sup>
Gradeability	Longitudinal 30° Side 12°



## BLADE ATTACHMENT

	Angle Dozer	Straight Dozer
Overall length with dozer (mm)	4700	4455
Blade length x height (mm)	3350 x 865	2760 x 990
Max. lift above ground (mm)	1050	930
Max. drop below ground (mm)	380	445
Max. tilt adjustment (mm)	250	250
Max. Angling adjustment (degrees)	25	
Additional ground Pressure (kg / cm <sup>2</sup> )	0.108	0.109

### Mass (kg)

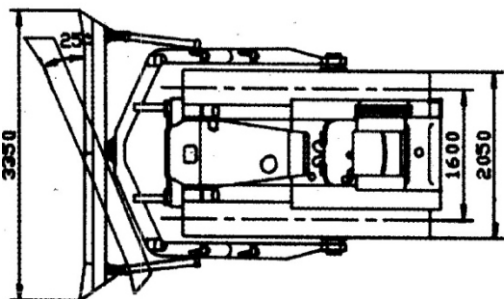
Dozer attachment	1470	1495
Hydraulic control unit	330	330



## OPERATING MASS

Mass of tractor only (including rated capacity of lubricant, coolant and fuel)	10370 kg
--	----------

### DIMENSIONS : in mm



Ground Clearance : 350 mm

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



## STEERING

### Steering Clutch

Type	Dry, multiple disc
Control	Hand operated with spring booster

### Steering Brake

Type	Dry, contracting band
Control	Hand operated

Min. turning radius 2.7 m

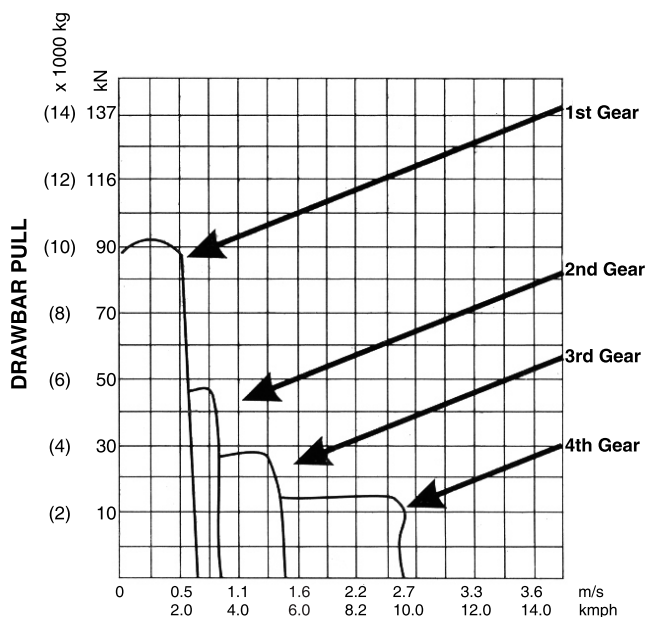


## COOLANT AND LUBRICANT CAPACITY (Refill)

System (refilling)	Capacity in ℓ
Cooling System	35
Engine oil pan	24
Fuel Tank	240
Main Clutch	15
Transmission bevel gear case	34
Final Drive (each side)	12
Hydraulic tank	50

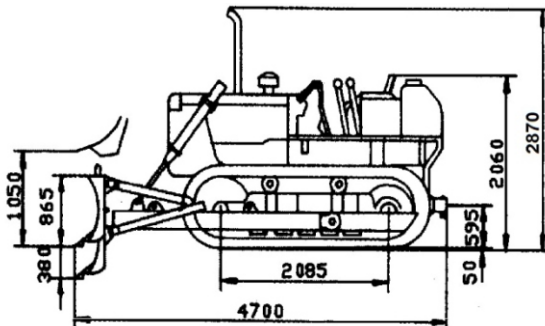


## DRAWBAR PULL Vs TRAVEL SPEED



### TRAVEL SPEED

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



**BD50**

**CRAWLER  
DOZER**

**TECHNICAL SPECIFICATIONS**

# बी ई एम एल लिमिटेड BEML LIMITED

Schedule 'A' Company under Ministry of Defence, Govt. of India

## Business Network

## Corporate Office

BEML Soudha, 23/1, 4th Main,  
S.R. Nagar, Bangalore – 560 027

T + 91 80 22963240, 22963250

F + 91 80 22963278/516/280/164

E-mail: office.cpd@beml.co.in  
corpcomm@beml.co.in

## International Business Division

Flat No. E,F,G, H, 'Vandana' 11<sup>th</sup> Floor,  
11, Tolstoy Marg, Connaught Place  
New Delhi – 110 001

T + 91 11 23316500

F + 91 11 23325085

E-mail: mx@beml.co.in

## Marketing Division

5th Floor, Unity Building,  
J.C. Road, Bangalore – 560 002

T + 91 80 22963501/02/07/510/540

F + 91 80 22963541

E-mail: m@beml.co.in  
mmd@beml.co.in

## REGIONAL OFFICES

### Bangalore

4th Floor, Unity Building, J. C. Road,  
Bangalore - 560 002  
Karnataka

T + 91 97413 51588  
E-mail: mg@beml.co.in

### Bilaspur

1-A, Industrial Area, Sector-C, Sirgitti,  
Bilaspur - 495 223.  
Chhattisgarh

T + 91 7752 252745, 252598  
F + 91 7752 252065  
E-mail: mv@beml.co.in

### Neyveli

F-4, Dr. Rajendraprasad Road,  
Block-27, Neyveli, - 607 803  
Tamil Nadu

T/F + 91 4142 268517  
T + 91 4142 265517 / 229392  
E-mail: ma@beml.co.in

### Dhanbad

Mouza - Kangalo, Amaghata,  
Govindpur, KG Ashram Post, Dhanbad  
Jharkhand - 828 109

T + 91 94711 92023  
E-mail: mf@beml.co.in

### Hyderabad

3-6-114, Street No.18, Himayat Nagar,  
Hyderabad - 500 029  
Telangana

T + 91 40 2322 7032 / 94907 93117  
F + 91 40 23221794  
E-mail: rm.hyderabad@beml.co.in

### Kolkata

35/1A, Taratala Road,  
Kolkata - 700 088.  
West Bengal

T + 91 33 2401 5286 / 87 / 98 / 99  
F + 91 33 2401 5288  
E-mail: rm.kolkata@beml.co.in

### Mumbai

32A, Bazar Road,  
Near Jain Mandir, Bandra (West), Mumbai,  
Maharashtra - 400 050

T + 91 22 26431875 / 26435875  
F + 91 22 26423928  
E-mail: rm.mumbai@beml.co.in

### Nagpur

No 33, Cement Road,  
Shivaji Nagar,  
Nagpur - 440 010, Maharashtra.

T + 91 712 2248435 / 2248343  
F + 91 712 2249997  
E-mail: mn@beml.co.in

### New Delhi

Flat E,F,G,H, 'Vandana', 11th Floor,  
11, Tolstoy Marg, Connaught Place,  
New Delhi - 110 001

T + 91 11 2344 3511 / 3528 / 2331 6500  
F + 91 11 2332 5085  
E-mail: ml@beml.co.in

### Ranchi

206/D-1, Bhagirathi, (Behind NCC Campus)  
Rameshwaram Colony, Bariatu Road,  
Ranchi, Jharkhand - 834 009

T + 91 651 2540710 / 94311 08531  
E-mail: mr@beml.co.in

### Sambalpur

BEML Complex, NH-6, Panchagachhia,  
Baraipalli Post, Sambalpur 768 006  
Odisha.

T + 91 663 2521604 / 2521389  
E-mail: mb@beml.co.in

### Singrauli

PB No. 5, Jhingurdha Colliery,  
Singrauli - 486 889  
Madhya Pradesh.

T + 91 7805 272668 / 272318  
F + 91 7805 272282  
E-mail: rm.singrauli@beml.co.in

## ACTIVITY CENTRES

### Bhopal

Ground Floor, Hall No.1, Chittod Complex, Zone-1,  
Maharanapratap Nagar (MP Nagar), Bhopal - 462 011

T + 91 755 2550711 / 8989459753

### Panjim

BEML Limited, 5/4, Victor Building, Fontanhas, Mala,  
Panjim - 403 001, Goa

T + 91 832 2225135 / 77986 87178

### Itanagar

C/o. Tobom Riba, H-Sector, Papum  
Itanagar - 791 113, Arunachal Pradesh

T + 91 94029 34205 / 88372 15852

### Kochi

No. 39/2122, Chittoor Road, Emakulam South,  
Kochi - 682 016

T + 91 484 2375138  
E-mail: rm.kochi@beml.co.in

### Maihar

Maihar, Madhya Pradesh

Mob: +91 79875 53768

Silapathar: Surya Vatika, Amritpur, Silapathar, Assam - 787 059 T + 91 95311 29059

## DISTRICT OFFICES

### Ahmedabad

99/100, BEML HOUSE, 2nd Street,  
Azad Society, Ambawadi,  
Ahmedabad - 380 015, Gujarat

T + 91 79 26445523 / 94264 13620  
F + 91 79 26423950  
E-mail: rm.ahmedabad@beml.co.in

### Asansol

3, Bumpur Road,  
Asansol - 713 304  
West Bengal

T + 91 341 2252480  
F + 91 341 2250601  
E-mail: mca@beml.co.in

### Bacheli

Behind Central Stores of NMDC Ltd.,  
Depot 5, Bacheli - 494 553.  
Chhattisgarh

T/F + 91 7857 230005  
E-mail: rm.bacheli@beml.co.in

### Bhilai

Room no 22/C, BSP Expansion Building,  
Near Ispat Bhavan, Bhilai 490 001, Chhattisgarh

T + 91 788 2223880  
F + 91 788 2221652  
E-mail: mnb@beml.co.in

### Bhubaneswar

252/A, Lewis Road  
Bhubaneswar - 751 014  
Odisha

T + 91 674 2434427 / 99373 83950  
E-mail: mbb@beml.co.in

### Chandrapur

Mamidwar, Tiles Factory Compound  
Ghugus Road, Padoli  
Chandrapur - 442 406 Maharashtra

T + 91 7172 287230  
F + 91 7172 287560  
E-mail: mnc@beml.co.in

### Chennai

Flat No. 10, Supriya Estates,  
No.3, Sterling Road, Nungambakkam,  
Chennai - 600 034, Tamil Nadu,

T + 91 44 28220844  
F + 91 44 28257319  
E-mail: rm.chennai@beml.co.in

### Guwahati

No.11, Ward 43, Hengrabani Road,  
Ganesh Puri, Dispur,  
Guwahati - 781 006 Assam

T + 91 361 2232966  
F + 91 361 2232967  
E-mail: rm.guwahati@beml.co.in

### Hospet

No.1431, Manjunatha Complex,  
Bhagat Singh Nagar, Opp. KSSIDC Indl. Estate,  
Dam Road, Hospet - 583 203, Karnataka

T/F + 91 8394 230172  
E-mail: rm.hospet@beml.co.in

### Jammu

62C, Block D/C, Gandhi Nagar,  
Jammu tawi - 180 004  
Jammu and Kashmir

T + 91 191 2459 437  
F + 91 191 2430 447  
E-mail: mlj@beml.co.in

### Kothagudem

Old Project Planning Department,  
Near SCCL Corporate Office,  
Kothagudem - 507 101, Telangana

T + 91 8744 245572  
F + 91 8744 245530  
E-mail: rm.kothagudem@beml.co.in

### Leh

174-B, (Near Royal Enfield Showroom),  
Housing Colony, Leh, Ladakh -194 101

T + 91 1982 258828 / 94198 71008  
E-mail : mll@beml.co.in

### Ramagundam

Near SCCL TTC, Jawahar Nagar,  
Behind CISF Camp, Godavarikhani - 505 209.  
Peddapalli Dist., Telangana

T + 91 8728 248299 / 94408 58441  
E-mail: mhr@beml.co.in

### Udaipur

20-B, Uchhab Bhavan, Bedla Road,  
Fatehpura, Udaipur - 313 001.  
Rajasthan

T + 91 294 2452054  
E-mail: mww@beml.co.in

### Visakhapatnam

No. 8-45-11, 4th Lane,  
Vidyanagar Chinna Waltair Colony  
Visakhapatnam - 530 003, Andhra Pradesh

T/F + 91 891 2754608 / 83320 54590  
E-mail : rm.vizag@beml.co.in

**www.bemlindia.in**

Represented by:

बी ई एम एल लिमिटेड  
BEML LIMITED

Schedule 'A' Company under Ministry of Defence, Govt. of India