

# BD30W-1

## WHEEL DOZER



### Salient Features :

- Productivity
- Reliability
- Manoeuverability
- Serviceability & Maintainability
- Comfort
- Electronic Monitoring System



Blade Capacity	: 4.7 m <sup>3</sup>
Operating Mass	: 30,000 kg
Fly Wheel Horse Power (net)	: 224 kW (300 fhp) @ 2100 rpm

# BD30W-1

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## Salient Features :

### Productivity:

High power engine, rugged Electric Shift Transmission featuring 3 forward and 3 reverse speeds, heavy duty planetary axle for high tractive effort and gradeability at all operating conditions.

### Reliability:

Attention free wet multiple disc brakes for front and rear axles, and box type chassis for uniform stress distribution. The cutting edges, end bits, pins and bushings are highly reliable and durable.

### Manoeuverability:

Articulation with power steering, optimum combination of travel speed, turning radius and wheel base ensures very high level of manoeuverability.

### Serviceability & Maintainability:

Electronic display and monitoring system helps to prevent minor problems from becoming major ones.

### Comfort:

Roomy walk-through cab, with ergonomically arranged manually operated control lever for speeds in forward / reverse selections, cushioned suspension adjustable seat and excellent visibility assures easy dozing and leveling.

### Electronic Monitoring System:

The EMS is designed to monitor the health of the equipment and to provide an audio visual warning to prevent equipment breakdown through early detection. The entire operator controls, warning displays and control switches are fitted on a FRP dashboard with a high degree of ergonomics and comfort. Besides gauge and electronic hour meter, other warning parameters are monitored to provide audio-visual signal. Also a "SYSTEM CHECK" facility stimulates all faults together to check proper functioning of the electronic unit and warning lamp assemblies.



## ENGINE

Make	BEML
Model	BS6D140-1
Type	Diesel, 4 cycle, Water cooled, Direct injection
Aspiration	Turbo charged
Net Power	224 kW (300 fhp)@2100 rpm(As per ISO:9249)
Maximum Torque	1247.8 Nm (127.2 kgm) @ 1400 rpm
No. of cylinders	6
Bore x Stroke	∅ 140 x 165 mm
Piston Displacement	15.24 ℓ
Compression ratio	15.0:1
Governor	Mechanical
Lubrication system	Forced lubrication, gear pump
Air cleaner	Dry type
<b>Electricals</b>	
Alternator	24 V / 100 A
Starting motor	24 V / 7.5 kW
Battery	2 x 12 V / 200 Ah

## TRANSMISSION

<b>TORQUE CONVERTER</b>			
Type	3 element, single stage single phase		
<b>Transmission</b>			
Type	Full power shift planetary gear electro hydraulic control valve		
Gear	3 F / 3R		
Stall torque ratio	3.23 : 1		
Max. Drawbar pull	22,000 kg		
<b>Travel speed (km/h)</b>			
<b>Gear</b>	<b>1st</b>	<b>2nd</b>	<b>3rd</b>
Forward	6.67	12.9	24.75
Reverse	6.4	12.57	23.72

## DRIVE & AXLES

Drive System	Four wheel drive
Front & rear axle	Full floating type
Reduction & Differential gear	Spiral bevel gear reduction
Final Drive	Planetary gear
Oscillating angle	15° both sides (total 30°)

## FILTRATION

Engine fuel & oil	Full flow spin-on type
Air	Double element, dry type with pre-cleaner and auto dust ejector
Transmission	Pressure line filter
Hydraulic steering & Braking	Return line filter

## STANDARD ACCESSORIES

**Engine :** Starter , Alternator

**Lights :** Head lights ,Rear working lights, Turn indicators (front & rear) ,Stop & tail lamp, Back-up lamp

**Gauges :** Fuel level, Engine oil pressure, Coolant temperature, T/M oil temperature, RPM Meter, Trans oil pressure, Ammeter, Air pressure, Hour meter

**Pilot Lamps :** High beam , Turn indicators

**Caution Lamps :** Engine oil pressure ,Transmission oil pressure, Air Pressure, Coolant temperature, Parking brake applied, Battery charging .

**Others :** Wind shield wiper & washer, Tool kit, Dust indicator, Parking and emergency brake, Tyres 29.5 x 29-28PR(L-3), Straight blade (4.7 m<sup>2</sup> ), Fire Extinguisher-6 kg, Back-up alarm, Sight gauge, Seat belt, Floor mat, Sun visor, Fan, Rear view mirror, Roof lamp, ROPS & FOPS Cabin.

## OPTIONAL ACCESSORIES

ROPS Canopy, Air conditioners, Heater, Defroster, Fire Extinguisher- 2kg, Canopy, Tyre inflation kit, Pre- heater, 5.9 m<sup>3</sup> Blade, Auto Fire Suppression System



## HYDRAULIC SYSTEM

### Hydraulic Pump

Main pump	Gear Pump
Capacity	235 l / min @ 2100 rpm
Relief Pressure	13.73 MPa (140 kg/cm <sup>2</sup> )

### Cylinders :

Lift Cylinder	Two, Double acting type
Bore x Stroke	∅ 140 x 990 mm
Tilt	One, Double acting type
Bore & Stroke	∅ 225 x 160 mm



## STEERING

Type	Center pivot frame articulation
Steering	Full hydraulic power steering system mechanism independent of engine speed

Relief pressure	17.2 MPa (175 kg / cm <sup>2</sup> )
Steering angle	Wide articulation of 30° on each side
Turning radius	9400 mm (outer tip blade)
Steering cylinders	2, double acting type
Bore x Stroke	∅ 110 x 547.5 mm



## BRAKES

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

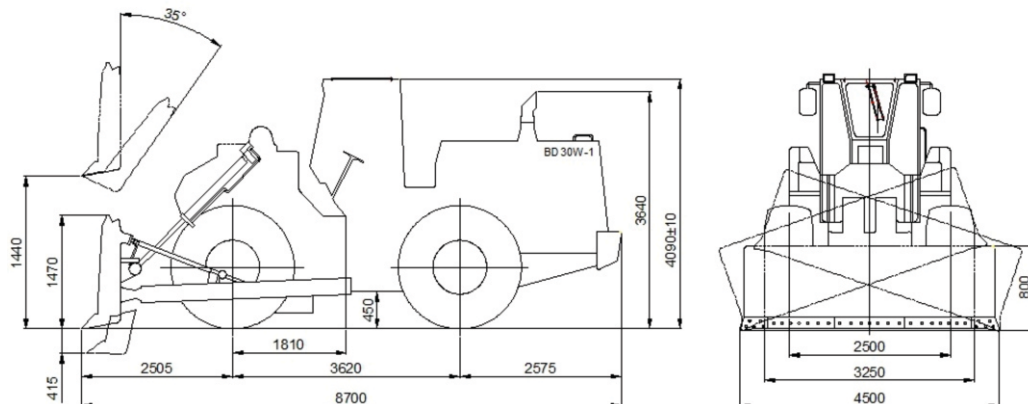


## COOLANT & LUBRICANTS CAPACITY (Refill)

System	Capacity (in l)
Engine oil pan	32
Fuel Tank	445
Cooling System	80
Hydraulic System	181
Front Axle	59
Rear Axle	59
Brake oil tank	2.4
Transmission & torque converter	62



## DIMENSIONS



## BLADE

A large capacity 4.7 m<sup>3</sup> blade results in higher and fast production while dozing stock piled material and general earth moving. The complete unit consists of blade, push arms, trunion mounting, reversible cutting edges and hydraulic lift and tilt cylinders. Mono lever at operator's right to control dozer, lift & tilt.

### Blade Controls :

Minimum effort is required to operator the blade control mono-lever assuring responsive smooth blade action.

### Control Positions :

Blade lift	Raise, hold, lower and float
Blade tilt	Tilt left, hold, tilt right



## OPERATING PARAMETERS

Blade type	Straight
Blade Capacity	4.7 m <sup>3</sup>
Blade width (over end bits)	4500 mm
Blade height	1470 mm
Max. lift above ground	1440 mm
Max depth of cut	415 mm
Max. Tilt adjustment	800 mm
Min ground clearance	450 mm



## OPERATING MASS

**Operating mass : 30,000 kg**  
(Including rated capacity of lubricant, coolant, fuel, 29.5 x 29-28 PR, 4.7 m<sup>3</sup> capacity blade and the standard equipment)



## CABIN

Spacious ROPS cabin with ergonomically arranged manually operated control lever for speeds in forward / reverse selections, cushioned suspension adjustable seat and excellent visibility assures easy dozing and leveling.



## TYRE

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

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

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: office@export.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

3rd Floor, Unity Building, J. C. Road,  
Bangalore - 560 002  
Karnataka

T + 91 80 2296 3524  
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: hyderabad@rm.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: kolkata@rm.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: mumbai@rm.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: nagpur@rm.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: nlm@rm.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: ranchi@rm.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: singrauli@rm.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  
E-mail: goa@rm.beml.co.in

### Itanagar

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

T + 91 94029 34205 / 88372 15852  
E-mail: mcgi@beml.co.in

### Kochi

No. 39/2122, Chittod Road, Ernakulam South,  
Kochi – 682 016

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

### Maihar

Maihar, Madhya Pradesh

Mob: +91 79875 53768

### Silapathar

Silapathar: Surya Vatika, Amritpur, Silapathar, Assam - 787 059

T + 91 95311 29059

### Visakhapatnam

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

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

## 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: ahmedabad@rm.beml.co.in

### Asansol

3, Burnpur Road,  
Asansol - 713 304  
West Bengal

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

### Bacheli

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

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

### Guwahati

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

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

### Leh

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

T + 91 1982 258828 / 94198 71008  
E-mail: ml@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

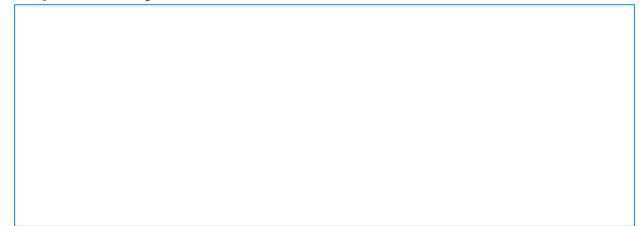
### Udaipur

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

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

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

Represented by:



बी ई एम एल लिमिटेड

**BEML LIMITED**

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

Wheel Dozers From BEML :

BD14W

BD30W-1

Form No. BD30W-1/01/2020