

# BG825

## MOTOR GRADER



### Salient Features :

- High Performance
- More Productivity
- Smooth Operation
- Operator Comfort



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Flywheel power (net) : 209 kW (280 hp) @  
2100 rpm

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Blade length : 4,928 mm

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Operating weight : 28,000 kg

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# BG825

## MOTOR GRADER

### Salient Features :

#### Performance :

- With its high engine horse power and operating weight, BG825, is ideal for heavy duty road construction/maintenance jobs at mining yards and demanding job sites.

#### Productivity :

- High Power BEML engine, high-performance blade equipment and frame articulation ensure high productivity.

#### Operating Ease :

- The finger tip control of a smooth, electrically controlled transmission provides high maneuverability.

#### Comfort :

- Rear frame mounted operator's compartment enables greater viewing ease of the machine's traveling direction. Operator's Comfort is enhanced by adjustable oil suspension seats and rubber pad mounted operator's compartment. Electronic display monitoring system facilitates daily maintenance checks and alerts the operator in the event of malfunction.

#### Patents Applied :

- Facilitation of emergency manual blade down system.
- Emergency Brake in Air brake system.
- An operator safety structure
- Accelerated Fast Filling System.
- Introduction of Air Drier in Brake System.
- Improved work control system.



### ENGINE

Make	BEML
Model	BS6D140EG
Type	Diesel, 4 stroke, water-cooled, overhead valve, turbocharged, direct injection electronically controlled speed governor.
Flywheel power	209 kW (280 hp) @ 2100 rpm (SAE J1349)
No. of cylinders	6, inline
Bore x Stroke	ø 140 x 165 mm
Displacement	15,240 cc
<b>Electricals</b>	
Alternator	24 V, 80A
Starting motor	24 V, 7.5 kW
Battery	2 x 12 V, 200 Ah Low Maintenance batteries



### TRANSMISSION

Make	BEML							
Type	Hydro shift transmission							
Travel speeds (km/h) at rated engine rpm								
	1st	2nd	3rd	4th	5th	6th	7th	8th
Forward	4.0	5.4	8.0	11.5	15.8	21.4	31.3	44.9
Reverse	4.3	5.8	8.5	12.2	16.9	22.8	33.4	47.9
Max Drawbar pull	14,420 kg							



### AXLES

<b>Front axle</b>	
Type	Reverse Elliot-type
Oscillation angle	32° (total)
Front wheel leaning	18° (each side)
Rear axle	Full-floating rear axle is made of forged heat treated steel.



### FINAL DRIVE

Type	Double - reduction final drives of spiral bevel gears with electric - over hydraulically controlled differential lock-unlock device and planetary gear, roller-chain tandem drives for four rear wheels.
Tandem	Tandem case swings upto 15 degree assuring high machine stability and positive traction during operation.



### BRAKES

Service Brake	Foot operated, oil disc brakes, air actuated on 4 rear wheels and sealed for adjustment - free operation. Two crossed brake lines for sure braking
Parking brake	Mechanical, dry, disc type actuated on transmission output shaft, spring applied and air released.

### STANDARD ACCESSORIES

Adjustable console and work-equipment control levers, Adjustable seat, Horn, Back-up alarm, Stop and tail lamps, Panel lamp, Pilot check valves for blade lift, Blade tipping, Front wheel leaning, Drawbar side shift and frame articulation cylinders, Turn single lights, Front working lights, Rear working lights, Head lights, Rear view mirrors, Front pull hook, Rear Drawbar, Fire extinguisher.

### OPTIONAL ATTACHMENTS

Rear Mounted Ripper : Four, Parallel linkage type, with hydraulically controlled raise and lower functions, this ripper can be used to dig out rocks or hard ground not removed by a scarifier.

No. of shanks	3
(max. 4 shanks installable)	
Max. digging depth	480 mm
Max. lift above ground	675 mm
Max. digging width	2,980 mm
Additional weight	2,585 kg
Push plate, Tyre inflation kit, AC Cabin, Auto lube system, Auto fire suppression system, ROPS mounted rear and front lamp.	





## HYDRAULICS

### Hydraulic pumps

Type	Three gear pump (tandem) type
Capacity (total)	268 l/min (steering, work equipment control LH and RH)
1st Pump	131 l/min - steering
2nd pump	74 l/min - control LH work equipment
3rd pump	63 l/min - control RH work equipment

### Hydroshift transmission pump

Type	Gear type
Capacity	133 l/min

### Differential pump

Type	Gear type
Capacity	17 l/min

### Hydraulic motor

Type	Piston type hydraulic motor
Output power (for blade rotation)	49 kW (66 hp)

### Hydraulic cylinders

Type	Double acting piston type, each connected to pilot check valve for positive cylinder action.
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### Operation

#### Qty. in numbers

Blade lifting	2 (without pilot check valve)
Blade side shifting	1
Drawbar side shifting	1
Front wheel leaning	1
Blade tipping	1
Frame articulation	2
Front wheel steering	2

### Control valves

Type	5-spool type, two valves (LH & RH) with built-in relief valve
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### Relief valve settings

Work equipment	210 kg/cm <sup>2</sup>
Steering	175 kg/cm <sup>2</sup>
Transmission	31 kg/cm <sup>2</sup>



## STEERING

Type	Orbitrol, full hydraulic steering system
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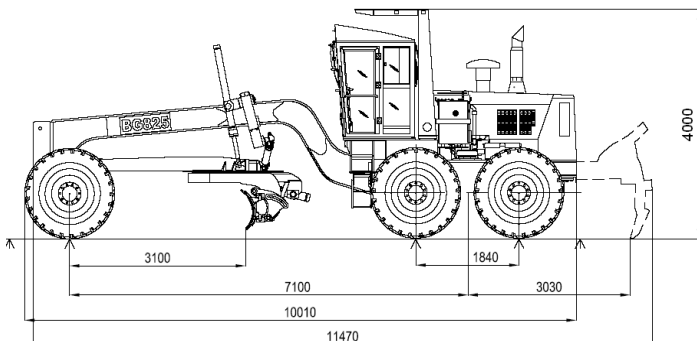
### Cylinders

Type	Double acting
Quantity	2 nos.
Max. steering angle	50° left and right of front wheels
Frame articulation angle	25° left and right
Min. turning radius	7.9 m
(Frame articulated)	



## WHEELS

Front & rear tyres	18.00 x 25 - 12 PR (L-3) rock-type tubeless tyres
Rims	13.00 VA x 25 TB
Inflation pressure	2.6 kg/cm <sup>2</sup> max.



ROPS and Cabin (low-profile type), push-plate and rear mounted ripper are optionally available

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



## SYSTEM REFILL CAPACITY

### Systems

### Capacity (Litres)

Coolant	58
Fuel tank	500
Engine	36
Transmission	35
Tandem case (each side)	115
Final drive case	57
Hydraulic oil	80



## BLADE RANGE

All blade movements and positions can be hydraulically controlled from the operator's seat.

Max. lift above ground	490 mm
Max. drop below ground	680 mm
Max. shoulder reach : Left	2,400 mm
: Right	2,400 mm
Max. bank cutting angle	90°
Hydraulic blade tip	49° forward, 5° backward
Cutting angle	25.5° ~ 84°



## BLADE EQUIPMENT

### Drawbar

Type	A-shaped, U-section press - formed and welded construction for maximum strength
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### Circle

Type	Internal gear type, hydraulically controlled with six guide shoes for 360° smooth rotation.
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Circle diameter (outer)	1,775mm
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### Mould Board

Type	Box-section construction with wear resistant steel, hydraulic blade side shift and tip control. Reversible overlay end bits, side edges are attached.
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Length X height	4928mmX692mmX25mm(min.)(curved edge std.)
X thickness	4876mmX653mmX25mm(min.)(straight edge opt.)
Blade Base	3,100mm
Blade Load	13,720kg

### Cutting Edges -

Type	Curved / Straight type cutting edges as per ISO:7129
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No. of cutting edges	2 (Curve cutting edge) , 4 (Straight cutting edge)
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Length X height	2438mmX203mmX19mm (Curve cutting edge)
X thickness	1219mmX130mmX20mm (Straight cutting edge)



## FRAMES

### Type

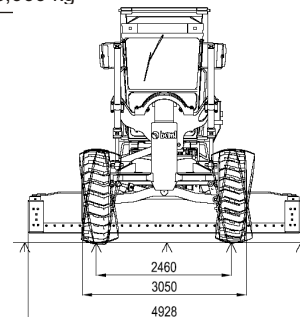
Frames are articulated by two hydraulic cylinders. Box sectioned front and rear frames are of steel plate welded construction and connected with an articulation pin. One-piece frame design for the Front Frame in which hydraulic pipings are installed.

Front frame section	350 mm (width) x 400 mm (height)
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## OPERATING WEIGHT

On front wheels	8,400 kg
On rear wheels	19,600 kg
Total weight (approx.)	28,000 kg



GROUND CLEARANCE - 440mm



# 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, Ernakulam 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, Burnpur 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  
T + 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

Fiat 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, Hengrabari 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 : 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

### 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

Grader From BEML :

BG405A

BG605I

BG605A

BG825

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