

BG605A

MOTOR GRADER

- BEML BSIII CEV Compliance Engine
- High Productivity
- Easy Operation
- Operator Comfort



Gross Power	: 127 kW (170.30hp) @1800 rpm
Flywheel Power (net)	: 121 kW (162.20hp) @1800 rpm
Blade Length	: 3665 mm
Operating Weight (with Canopy)	: 15,035 kg
(with ROPS Cabin)	: 15,800 kg
(with Ripper & counter Weight)	: 17, 720 kg

BG605A

MOTOR GRADER

Salient Features :

Product :

- BEML BG605A Motor Grader has been fitted with Bharat Stage III-BEML CEV Compliant Engine.

Performance :

- With its high engine horse power and operating weight BG605A is ideal for heavy duty road constructions/ maintenance jobs at mining and at demanding job sites.

Productivity :

High Power engine, coupled with high performance blade ensure high productivity. Finger tip control of transmission gear shifting provides high manoeuvrability.

Comfort :

Front Frame mounted operator's compartment enables ease of viewing the machines traveling direction. Operator's comfort is enhanced by adjustable suspension seats & rubber pad mounted operator's compartment.



ENGINE

Make	BEML
Model	BSAA6D125 BSIII CEV
Type	Diesel, 4 stroke, water-cooled, turbocharged overhead valve, direct injection, mechanical variable speed governor.
Power (Gross)	127 kW (170.3 hp) @ 1800 rpm
Maximum torque(Gross)	785 Nm (80.0 kgm) @ 1200 rpm
Bore x Stroke	ø 125 x 150 mm
Displacement	11.04 l
No of Cylinders	6, Inline
Electricals	
Alternator	24 V, 45A
Starting motor	24 V, 7.5 kW
Battery	2 x 12 V, 200 Ah



TRANSMISSION

Make	BEML
Type	Hydroshift Transmission
Travel Speed (kmph)	
Range	1st 2nd 3rd 4th 5th 6th
Forward	3.5 6.3 10.6 14.7 26.4 44.1
Reverse	4.1 7.5 12.6 17.4 31.3 --
Max. drawbar pull	9400 kg
Max Speed (kmph)	Forward : 44.1 Reverse: 31.3



AXLES

Front axle	
Type	Elliot - type
Oscillation angle	15° (each side)
Front wheel lean Angle	23° (each side)
Rear Axle	
Full floating rear axle is made of forged heat treated steel.	



FINAL DRIVE

Type	Double reduction final drives of spur and spiral bevel gears with electric over hydraulically controlled differential lock - unlock device and , roller-chain tandem drives for four rear wheels.
Tandem	Tandem case swings upto 13° assuring high machine stability and positive traction during operation.



STANDARD EQUIPMENT

Engine coolant temperature gauge, Engine oil pressure gauge, Transmission oil temperature gauge, Transmission pressure gauge, Fuel gauge, ROPS canopy, Ammeter, Headlights, Speedometer, Stop and tail lamp, Turn signal lights, Rear view mirrors, Electric horn, Tool kit with tool box, Tachohour meter, Air pressure gauge, Back-up light, Back-up alarm, Cold start system, Front pull hook, High beam indicator lamp, Voltmeter and Dust indicator.

OPTIONAL ATTACHMENTS

1. Scarifier

V-type, 2-stage adjustable, hydraulically controlled

Number of teeth	11 no's
Digging width	1225 mm
Max. digging depth	390 mm
Max. lift above ground	465 mm
Scarifier base	1000 mm
Scarifier load	4895 kg
Digging angle	
Standard	66°
Maximum/Minimum	72° / 60°

Additional weight 635 kg

2. Front Dozer Blade

Front arc, box-section type, hydraulically controlled

Blade Length x Height	2500 mm x 935 mm
Max. drop below ground	175 mm
Max. lift above ground	545 mm
Blade base	1825
Digging angle	55°
Additional weight	935 kg

3. Rear Mounted Ripper with counter weight

No. of shanks	3 no's
Max. digging depth	460 mm
Max. Lift above ground	550 mm
Max. Digging width	2195 mm
Additional Weight	1930 kg

4. Miscellaneous

ROPS cab (additional weight) :	765 kg (approx.)
Tyre inflation kit	



HYDRAULIC SYSTEM

Type Four gear pumps powering the work equipment, steering and transmission, differential lock - unlock and hydraulic circuits.

Capacity

1. Work Equipment	2 x 39 ℓ/min
2. Steering	50 ℓ / min
3. Transmission	78.0 ℓ/min
4. Diff. Lock & Unlock	14 ℓ/min

Hydraulic Motor

Type Orbit type hydraulic motor

Output Power (For blade rotation) 18 kW (24.5 hp)

Capacity 70.0 ℓ/min

Hydraulic Cylinders

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

Operation Qty. (Nos.)

Blade lifting	2
Blade side Shifting (Without pilot check valve)	1
Frame articulation	2
Draw bar side shifting	1
Front wheel leaning	1
Front wheel Steering	2

Control Valves

Type 5-way spool type & 4-way spool type with built-in relief valve.

Relief Valve Settings

Work Equipment	175 kg/cm ²
Steering	140 kg/cm ²
Transmission	31 kg/cm ²
Differential	25kg/cm ²



STEERING

Type Orbitrol, Full Hydraulic Steering System

Cylinders

Type Double acting

Quantity 2 nos.

Max. Steering Angle 40° left & right of front wheels

Frame Articulation Angle 25° Left and Right

Min. Turning radius 7.4 m



BRAKES

Service brake Foot operated, oil disk brakes, Air actuated on four wheels and sealed for adjustment-free operation. Two cross brake lines for sure braking.

Parking brake Hand operated internal expanding, shoe type, duo-servo type actuated on transmission output shaft.



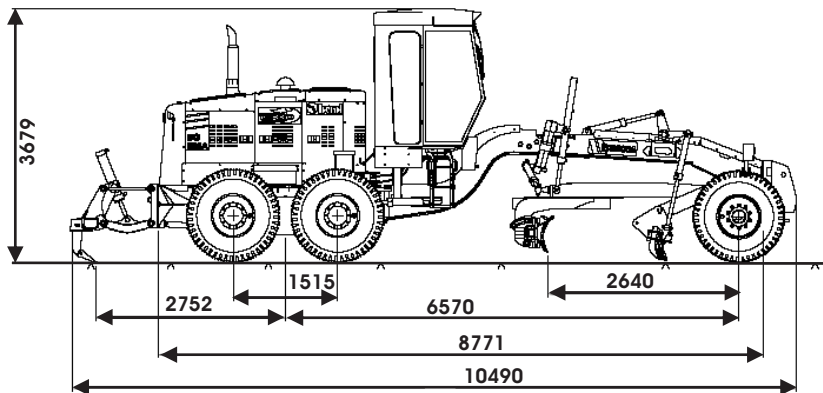
TYRES

Standard Fitment 14.00 x 24 - 16 PR (Tube type) G-2 type tyre

Optional Fitment 14.00 x 24 - 16 PR (Tube type) G-3 Rock type tyre

Rims 10.00 VA x 24

Inflation Pressure 2.8 kg/cm² (40 PSI)



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



COOLANT AND LUBRICANT CAPACITY

Systems

Capacity (ℓ)

Coolant	55
Fuel tank	250
Engine	26
Transmission	36
Tandem case (each side)	36
Final drive case	30
Hydraulic oil	58



BLADE RANGE

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

Max. lift above ground 400 mm

Max. drop below ground 500 mm

Max. Shoulder Reach

Left 1670 mm

Right 1955 mm

Max. bank cutting angle 90°

Cutting Angle standard 36°

Maximum 71°

Minimum 24°



BLADE EQUIPMENT

Draw Bar

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

Circle

Type Internal gear type hydraulically controlled with 6 guide shoes for 360° smooth rotation.

Circle diameter (outer) 1410 mm

Mould Board

Type Box-section construction with wear resistant steel, hydraulic blade side shift and tip control, cutting edges and side edges are attached.

Length x Height x Thickness 3665 mm x 540 mm x 20 mm

Blade base 2640 mm

Blade load 6300 kg

Cutting edges

Type Tungsten carbide tipped cutting edges

No. of cutting edges 4

Length x Height x Thickness 914 mm x 152 mm x 27 mm

Thickness



FRAMES

Box section front frame, two box section rear frames are of steel-plate welded construction. One-piece-frame design for the front frame in which hydraulic pipings are installed.

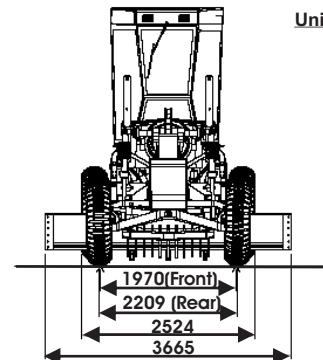


OPERATING MASS

On front wheels 3700 kg

On rear wheels 12100 kg with cabin

Total Mass (approx.) 15800 kg with cabin



Unit in mm

Ground Clearance ..325mm

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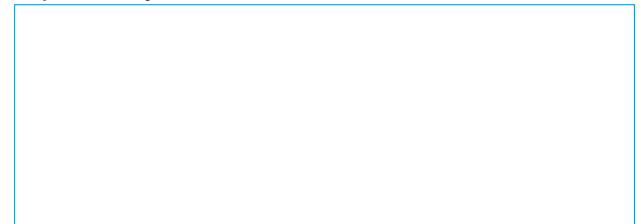
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Schedule 'A' Company under Ministry of Defence, Govt. of India

Grader From BEML :

BG405A

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BG605I

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