

BG605I

MOTOR GRADER

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



Gross Power :

With BEML Engine : 112 kW (150.18 hp) @ 1800 rpm

With ALU Engine : 120 kW (160.91 hp) @ 2300 rpm

Blade Length : 3,665 mm

Operating Weight :

With ROPS Cabin : 14,700 Kg

With Ripper : 16,880 Kg

BG605I

MOTOR GRADER

Salient Features :

Product :

- BG605I Motor Grader has been fitted with Bharat Stage III CEV Compliant Engine.

Performance :

- With its high engine horse power and operating weight BG605I is ideal for heavy duty road construction / maintenance jobs at mining and at demanding job sites.

Productivity :

- High Power engine coupled with high performance blade ensures high productivity. Finger tip control of transmission gear shifting provides high maneuverability.

Comfort :

- Rear Frame Mounted Operator's compartment enables ease of viewing the machine traveling direction. Operator's comfort is enhanced by adjustable suspension seat and rubber pad mounted operator's compartment.



ENGINE

Make	BEML / ASHOK LEYLAND	
Model	BSAA6D125 - BSIII CEV / H6ETIC3S/1	
Type	Diesel, 4-Stroke, Water Cooled, Turbocharged, Overhead Valve, Direct Injection, Mechanical variable speed governor.	
Power (Gross)	112 kW (150.18hp) @ 1800 rpm (BEML Engine) 120 kW (160.91hp) @ 2300 rpm (ALU Engine)	
Maximum Torque	721 Nm@1200 rpm / 590 Nm@1700-1900 rpm	
Displacement	11.04 ℓ / 5.76 ℓ	
Bore X Stroke	ø125x150mm / ø104x113mm	
Electricals		
Alternator	24V, 45A / 24V, 55A	
Starting Motor	24V, 7.5 kW / 24V, 4.5 kW	
Battery	2X12V, 200 Ah	



TRANSMISSION

Make	BEML (6F/5R) / ZF (6F/3R)					
Type	Hydro shift Transmission / Power shift Transmission.					
Travel Speeds(kmph)	BEML T/M (ZF T/M)					
Range	1st	2nd	3rd	4th	5th	6th
Forward	3.5(5.69)	6.3(8.69)	10.58(13.7)	14.5(20.7)	26.1(31.3)	43.6(44.69)
Reverse	4.1(6.0)	7.4(14.4)	12.4(32.79)	17.2(--)	30.9(--)	--
Max Drawbar pull	7280 Kg					
Max. speed (kmph)	Forward : 43.6 (44.69)		Reverse : 30.9 (32.79)			



AXLES

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



FINAL DRIVE

Type	Double – reduction final drive of spur and spiral gear, roller chain tandem drives for four rear wheels.
Tandem	Tandem case swings upto 13° assuring high machine stability and positive traction during operation.

OPTIONAL ATTACHMENTS

1. Scarifier

V-type, 2-stage adjustable, hydraulically controlled.

No of teeth	: 11 nos.
Digging width	: 1225mm
Max. Digging depth	: 390mm
Max. Lift above ground	: 465mm
Scarifier base	: 1000mm
Scarifier Load	: 4895 kg
Digging angle	

Standard	: 66°
Max / Min	: 72° / 60°
Additional weight	: 635 kg

2. Front dozer blade

Front arc, box section type, hydraulically controlled.

Blade length x Height	: 2500mm x 935mm
Max. Drop below ground	: 175mm
Max. Lift above ground	: 545mm
Blade base	: 1825mm
Digging Angle	: 55°
Additional weight	: 935 kg

3. Rear Mounted Ripper with Counter Weight

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

4. Miscellaneous

ROPS Cab (Additional weight)	: 765 kg (approx)
Tyre Inflation kit	



STANDARD EQUIPMENT

Engine coolant temperature gauge, Engine oil pressure gauge, Fuel gauge, ROPS Canopy, Ammeter, Headlights, Panel lamps, Speedometer, Stop and tail lamp, Work lamp, Turn signal lights, Rear view mirrors, Electric horn, Tool kit with tool box, Tachometer, Air pressure gauge, Back-up light, Back-up alarm, Cold start system, Front pull hook, High beam indicator lamp, Battery Charging lamp and Dust indicator.



HYDRAULIC SYSTEM

Type	Three gear pumps powering the work equipment, steering and transmission hydraulic circuits.
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Capacity	
1. Work equipment	2 X 39 ℓ / min
2. Steering	50 ℓ / min
3. Hydro shift transmission	78.0 ℓ/min (BEML Transmission Only)

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
Draw bar side shifting	1
Front wheel leaning	1
Front wheel steering	2

Control Valves	
Type	4-way spool type & 3-way spool type with built in relief valve.

Relief Valve Settings	
Work Equipment	175 kg/cm ²
Steering	140 kg/cm ²



STEERING

Type	Orbitrol, Full Hydraulic Steering System
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Cylinders	
Type	Double acting
Quantity	2 nos.
Max. Steering Angle	40° left & right of front wheels
Min. Turning radius	11.0 m



BRAKES

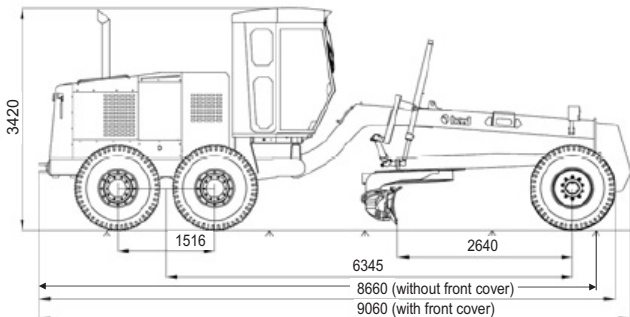
Service brake	Foot operated, internal expanding shoe type, air over hydraulic brakes actuated on all four rear wheels.
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Parking brake	BEML Trans , - Hand operated internal expanding, shoe type, duo-servo type actuated on transmission output shaft. ZF Trans , - Spring applied, air over hydraulic dry caliper disc type mounted on transmission output shaft.
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TYRES

Standard Fitment	14.00X24-16PR (Tube Type) G-2 type Tyre
Optional Fitment	14.00X24-16PR (Tube Type) G-3 (Rock) type Tyre
Rims	10.00 VA-24
Inflation pressure	2.8 kg/cm ² (40 PSI)



Ground Clearance ..330mm



COOLANT AND LUBRICANT CAPACITY

Systems	Capacity (ℓ)
Coolant	55
Fuel tank	250
Engine	26
Transmission (BEML / ZF)	36 / 25
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	570 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
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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
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Blade base	2640 mm
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Blade load	6300 kg
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Cutting edges	
Type	Tungsten carbide tipped cutting edges

No. of cutting edges	4
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Length x Height x Thickness	914 mm x 152 mm x 27 mm
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Thickness	
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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.



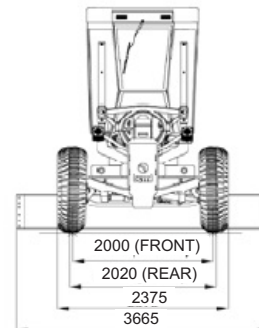
OPERATING MASS

On front wheels	3680 kg
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On rear wheels	11020 kg with cabin
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Total Mass (approx.)	14700 kg with cabin
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Unit in mm.



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

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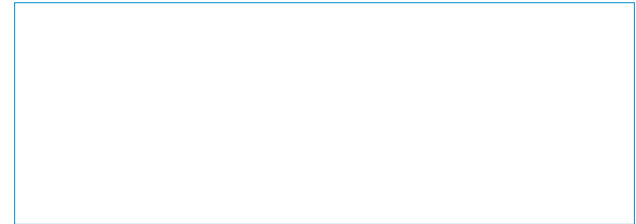
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Schedule 'A' Company under Ministry of Defence, Govt. of India

Grader From BEML :

BG405A

BGG05A

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