

# BG605I

MOTOR GRADER

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



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**Flywheel power (net) : 108 kW @ 1800 rpm**

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**Blade Length : 3,710 mm**

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**Operating Weight**

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**With ROPS Cabin : 14,700 Kg**

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**With Ripper : 16,880 Kg**

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# BG605I

MOTOR  
GRADER

## Salient Features:

### Product :

- BEML BG605I Motor Grader has been fitted with Bharat Stage III CEV Compliant BEML 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 travelling direction. Operator's comfort is enhanced by adjustable suspension seat and 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)      | 112 kW @ 1800 rpm   |
| Maximum Torque     | 721 Nm @ 1200 rpm   |
| Displacement       | 11.04 l   |
| Bore X Stroke      | ∅ 125x150mm   |
| <b>Electricals</b> |   |
| Alternator         | 24V, 45A  |
| Starting Motor     | 24V, 7.5 kW   |
| Battery            | 2X12V, 200 Ah (Optional 2X12V, 160Ah)   |

## TRANSMISSION

|                      |                          |     |      |                |      |      |
|----------------------|--------------------------|-----|------|----------------|------|------|
| Make                 | BEML                     |     |      |                |      |      |
| Type                 | Hydro shift Transmission |     |      |                |      |      |
| Travel Speeds (kmph) |                          |     |      |                |      |      |
| <b>Range</b>         | 1st                      | 2nd | 3rd  | 4th            | 5th  | 6th  |
| <b>Forward</b>       | 3.5                      | 6.3 | 10.5 | 14.5           | 26.1 | 43.6 |
| <b>Reverse</b>       | 4.1                      | 7.4 | 12.4 | 17.2           | 30.9 | --   |
| Max Drawbar pull     | 7280 Kg                  |     |      |                |      |      |
| Max. speed (kmph)    | Forward - 43.6           |     |      | Reverse - 30.9 |      |      |

## AXLES

|   |                   |
|---|-------------------|
| <b>Front Axle</b>   |                   |
| Type  | Elliot - Type     |
| Center Ground Clearance                                       | 625mm             |
| Oscillation Angle   | 15° ( each side ) |
| Front Wheel Leaning   | 23° ( each side ) |
| <b>Rear Axle</b>  |                   |
| Full floating rear axle is made of forged heat treated steel. |                   |

## STANDARD EQUIPMENT

Water level 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.

## 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           |                    |



## 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.      |

## HYDRAULICS

|      |   |
|------|---|
| Type | Three gear pumps powering the work equipment, steering and transmission hydraulic circuits. |
|------|---|

|                             |                |
|-----------------------------|----------------|
| <b>Capacity</b>             |                |
| 1. Work equipment           | 2 X 39 ℓ / min |
| 2. Steering                 | 50 ℓ / min     |
| 3. Hydro shift transmission | 78.0 ℓ / min   |

|                                   |                            |
|-----------------------------------|----------------------------|
| <b>Hydraulic Motor</b>            |                            |
| Type                              | Orbit type hydraulic motor |
| Output power (for blade rotation) | 18 kW (24.5 hp)            |
| Capacity                          | 70.0 ℓ / min               |

|   |  |
|---|--|
| <b>Hydraulic Cylinders</b>                      |  |
| 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  |

|                       |   |
|-----------------------|---|
| <b>Control Valves</b> |   |
| Type                  | 4-way spool type & 3-way spool type with built in relief valve. |

|                              |                        |
|------------------------------|------------------------|
| <b>Relief Valve Settings</b> |                        |
| Work Equipment               | 175 kg/cm <sup>2</sup> |
| Steering                     | 140 kg/cm <sup>2</sup> |

## STEERING

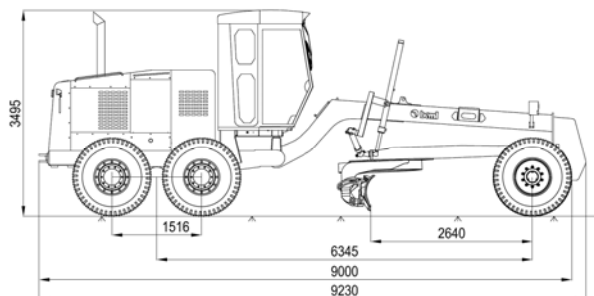
|                     |  |
|---------------------|--|
| Type                | Orbitrol, Full Hydraulic Steering System |
| <b>Cylinders</b>    |  |
| Type                | Double acting                            |
| Quantity            | 2 Nos.                                   |
| Max. Steering Angle | 40° left & right of front wheels         |
| Min. Turning Radius | 11m                                      |

## BRAKES

|                      |   |
|----------------------|---|
| <b>Service Brake</b> | Foot operated, internal expanding, shoe type, air over hydraulic brakes actuated on all four rear wheels. |
| <b>Parking Brake</b> | Hand operated internal expanding, shoe type, duo-servo type actuated on transmission output shaft.        |

## WHEELS

|                    |  |
|--------------------|--|
| 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 <sup>2</sup>                           |



## SYSTEM REFILL CAPACITIES

| Systems                 | Capacity ( Liters ) |
|-------------------------|---------------------|
| 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 operators seat

|                            |        |
|----------------------------|--------|
| Max. Lift above ground     | 400mm  |
| Max. Drop below ground     | 570mm  |
| <b>Max. Shoulder reach</b> |        |
| Left                       | 1670mm |
| Right                      | 1955mm |
| Max. Bank cutting angle    | 90°    |
| Cutting angle standard     | 36°    |
| Maximum                    | 71°    |
| Minimum                    | 24°    |

## BLADE EQUIPMENT

|                |   |
|----------------|---|
| <b>Drawbar</b> |   |
| Type           | A-shaped, U-section press formed and welded construction for maximum strength |

|                         |  |
|-------------------------|--|
| <b>Circle</b>           |  |
| Type                    | Internal gear type hydraulically controlled with 6 guide shoes for 360° smooth rotation. |
| Circle diameter (outer) | 1410mm   |

|                    |   |
|--------------------|---|
| <b>Mould Board</b> |   |
| 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 | 3710mm x 540mm x 20mm |
| Blade Base                  | 2640mm                |
| Blade Load                  | 6450 kg               |

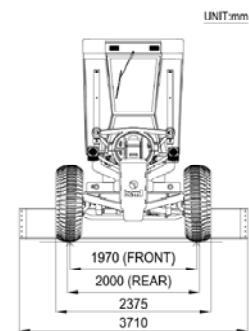
|                             |                                       |
|-----------------------------|---------------------------------------|
| <b>Cutting Edges</b>        |                                       |
| Type                        | Tungsten carbide tipped cutting edges |
| No. of cutting edges        | 4                                     |
| Length X height X thickness | 914mm x 152mm x 16mm                  |

## 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 piping's are installed

## OPERATING WEIGHT

|                     |          |
|---------------------|----------|
| On front wheels     | 3680 kg  |
| On rear wheels      | 11020 kg |
| Total Mass(approx.) | 14700 kg |



Ground Clearance....330 mm

Material and Specifications are subjected to change without notice, illustrations may include optional equipment & accessories.

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