

BG405A

MOTOR GRADER

- Powerful, BSIV Compliant Engine with optimum power to weight ratio
- Power Shift transmission
- Hydraulic Braking system
- Ergonomically designed spacious cabin with High Visibility
- Operator Comfort
- Electronic LCD Display



Gross Power	: 98 kW (133 hp) at 2300 rpm
Blade length	: 3050 mm (incl. Cutting Edges)
Operating weight	: 11,970 kg.

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MOTOR GRADER

Salient Features :

- Powerful, BSIV Compliant Engine (ASHOK LEYLAND) with optimum power to weight ratio
- Power Shift electronic transmission with automatic/manual gear shifting for smooth operation.
- Hydraulic work control.
- Safe and reliable hydraulic braking system.
- Ergonomically designed spacious Cabin with HIGH VISIBILITY
- Wide Working range through articulated frame
- Centralised Compact Electronic LCD Display Gauge cluster.
- Rocker switches with Legends
- Quick Convenient access for ground level refueling.



ENGINE

Make	ASHOK LEYLAND
	H6C4133 BSIV
Type	Diesel, 4 stroke, water-cooled, direct injection, Turbocharged, with Urea based after treatment system.
Power (Gross)	98kW (133hp) @2300 rpm
Maximum Torque	475 Nm @1400-1900 rpm
No. of cylinders	6 (Six)
Bore x stroke	∅ 104 mm x 113 mm
Displacement	5.76 ℓ
Electricals	
Alternator	24V, 55A
Starting motor	24 V, 4.5 kW
Battery	2 x 12 V, 100Ah



TRANSMISSION

Make-Model	M/s ZF - 6WG115 (6F/3R)						
Type	Power Shift transmission						
Travel Speeds (at rated engine rpm)							
Range		1st	2nd	3rd	4th	5th	6th
Forward	kmph	5.6	8.7	13.0	20.0	30.0	48.0
Reverse	kmph	5.9	14.0	32.0	--	--	--
Max. drawbar pull			6256 kg				



AXLES

Front axle	
Type	Reverse Elliot-type
Oscillation angle	30° (total) 15° up and down
Front wheel leaning	22° (to each side)
Rear axle	
Final drive type	Double-reduction final drives and roller chain tandem drives for four rear wheels.
Tandem	Tandem case swings upto 15° assuring high machine stability and positive traction during operation.



WHEELS

Front & rear tyres	11.00 x 20 - 18 PR
Inflation pressure	65 - 70 PSI
Rims size	8.00 x 20

STANDARD EQUIPMENT

GENERAL

Key switch
Engine shut off switch
Water separator
Engine side-covers
Cabin
Head and tail lights
Electric horn
Turn signal lights

Tilt steering wheel & column
Tool kit
Rear view mirrors
Back-up alarm & Light
Front pull hook
Work lamps
Parking brake switch
Reflectors.

GUARDS

Radiator fan guard
(Meets ISO 3457 requirements)

GAUGES

Ammeter
Water temperature
Engine oil pressure
Fuel level
Transmission oil temperature
Speedo meter
Tachometer
Hour meter

(Provided in centralised LCD gauge display)
Transmission display (Gear Range, Diagnostics)

INDICATORS

Hi-beam
Turn signal
Alternator charging
Low brake pressure
Parking light
Work lamp
Parking brake
Dust - indicator
Work equipment control
diagnostic indicator





BRAKES

Service brake	Foot operated, wet multiple disc type, accumulator assisted all hydraulic brakes.
Parking brake	Spring applied hydraulic release dry caliper disc brake assisted with accumulator, mounted on transmission output shaft.
Meets the ISO 3450 performance requirements.	



STEERING

Type	Orbitrol, full hydraulic steering system
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Cylinders

Type	Double acting
Quantity	2 nos.
Max. steering angle	40° left and right of front wheels
Articulation angle	25°
Min. turning radius (Frame articulated)	6.5 m



HYDRAULICS

Hydraulic pumps	Tandem gear pump powering the work equipment and single gear pump for steering system and brake actuation system.
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Capacity

Work equipment	113 ℓpm
Steering & Brake	66 ℓpm
Hydraulic cylinders	Double-acting piston type, each connected counter balance and port relief valves for smooth cylinder action.

Hydraulic Motor

Type	Orbit-type hydraulic motor
Output power / Torque (for blade rotation)	24 hp / 29 kg-m

Hydraulic Cylinders

Quantity	
Blade lifting	2
Blade side shifting	1 (without pilot check valve)
Drawbar side shifting	1
Front wheel leaning	1
Front wheel steering	2
Control Valves	4 way spool type (LH & RH) with built-in relief valve

Relief valve settings

Work equipment	12.75 MPa (130 kg/cm ²)
Steering	13.73 Mpa (140 kg/cm ²)



FRAMES

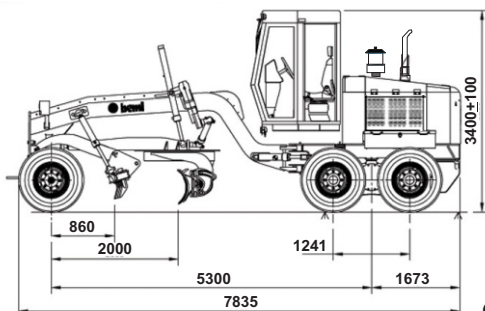
Type	Frames are articulated by two hydraulic cylinders. Box sectioned front and rear frame made of steel plate welded construction and connected with an articulation pin. One-piece frame design for the Front Frame in which hydraulic pipings are installed offers excellent front visibility for precision operation.
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Front frame section	270 mm(width) x 251 mm(height)
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OPERATING WEIGHT

On front wheels	3400 kg
On rear wheels	8570 kg
Total weight (approx.)	11970 kg



Ground Clearance ... 250 mm

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



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 four guide shoes for 360° smooth rotation.
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Circle diameter (outer)	1,145 mm
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Mould Board

Type	Box-section construction with wear resistant steel, hydraulic blade side shift and manual tip control, cutting edges and side edges are attached.
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Length X ht. X thickness	2970mm X 540mm X 20mm
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Blade Base	2000 mm
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Blade Load	5894 kg
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Cutting Edges - STANDARD FITMENT

Type	Tungsten carbide tipped cutting edges
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No. of cutting edges	4
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Length X ht. X thickness	762mm x 152mm x 27mm
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BLADE RANGE

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

Max. lift above ground	400 mm
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Max. drop below ground	400 mm
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Max. shoulder reach :	Left	1600 mm
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:	Right	1650 mm
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Max. bank cutting angle	90°
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	Standard - 45°
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Cutting angle	Maximum - 82°
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	Minimum - 38°
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SCARIFIER

V-type, hydraulic controlled

Number of teeth	9
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Digging width	1065 mm
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Max. digging depth	230 mm
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Max. lift above ground	400 mm
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Scarifier base	860 mm
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Scarifier load	3480 kg
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Digging angle

Standard	66°
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Maximum/Minimum	72° / 60°
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Additional weight	480kg
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SYSTEM REFILL CAPACITIES

Systems	Capacity (Liters)
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Coolant	45
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Fuel tank + urea solution (Ad Blue)	180+24
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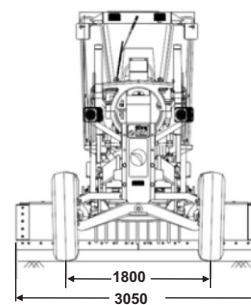
Engine	16
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Transmission	21
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Tandem case (each side)	60
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Final drive case	31
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Hydraulic oil	41
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TECHNICAL SPECIFICATIONS

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