

BL14TH

TYRE HANDLER



Salient Features

- Sturdy direct injection type, turbo charged BEML Diesel Engine for Sustained power and fuel economy.
- Articulated power steering for higher manoeuvrability and faster cycles.
- Limited slip differential front and rear axles for positive traction while loading.
- Rear axle oscillation offers stability to the machine on rough and uneven terrains.
- Centre point articulation for safer steering operation.
- Neutral starter switch in the circuit to avoid engine starting when transmission gear shift lever is not in neutral.
- Continuous rotation of the gripping pads.
- Smooth rotation of the Head assembly.
- Upto 1,91,334 N of gripping force on the tyre.
- Lateral carriage movement of 200 mm for precision side shift alignment.
- Optimum operator control and visibility.
- A complete range of large off-the-road tyre handling capabilities.
- All wheel drive and the articulating features of the carrier vehicle.



Tyre Lifting Capacity : 3500 kg
Operating mass : 21,500 kg

BL14TH

Technical Specifications



Engine

Make	BEML Ltd.
Model	BS6D105-1
Type	Water cooled 4 cycle, over head valve, direct injection type, turbo charged diesel engine.
No. of Cylinders	6
Bore & Stroke	105 x 125 mm
Displacement	6.5 litre (6,499 cc)

HORSE POWER

Rated BHP	110 KW (148 HP) @ 2000 rpm
Flywheel Power	94 KW (126 HP) @ 2000 rpm
Maximum torque	565 Nm (58kgm) @ 1400 rpm

FUEL SYSTEM

Type	BOSCH type, MICO FIP system
Governor	Mechanical, all speed control

LUBRICATION SYSTEM

Method	Gear pump, forced lubrication
Cooler	Water cooled

Cooling System

Radiator	Continuous finned flat tube de-aeration type tank
Pump	Centrifugal pump
Fan	Blower type
Air cleaner	Dry, 2-stage, horizontal type
Air compressor capacity	160 CC

Electricals

Starting method	Electric
Starting motor	24V, 4.5kW
Alternator	24V, 45A
Battery	24V (2x12V), 150Ah



Transmission

Torque converter	
Model	W340
Type	Hydrodynamic
Stall ratio	3.095:1
Transmission	
Model	4WG190 ERGO POWER
Type	Rear mounted multi speed power shift transmission with four forward & three reverse speeds
Controls	Manual Range Selector



Axles & Final Drive

Axles					
Type	Front axle is fixed, and rear axle oscillates up or down by 10°, (total 20°)				
Final Drive					
Type	Four wheel drive full floating with planetary reduction in each wheel.				
Travels Speeds					
Forward	km/h	m/s	Reverse	km/h	m/s
1st	6.28	1.74	1st	6.61	1.84
2nd	11.66	3.24	2nd	12.24	3.40
3rd	21.43	5.95	3rd	22.34	6.20
4th	31.40	8.72		--	--



Brakes

Service brakes	Wet Multiple disc type. Air over Hydraulic actuated
Parking-cum emergency brakes	Disc type, spring applied and hydraulic released operating pressure @ 126kg/cm ²



Hydraulic System

Pump Type	Vane Pump
Capacity	320 litres / min
Relief Pressure	13.73 MPa (140 kg/cm ²)
Control Valve Type	Double spool type
Positions	
Lift System	Raise, Hold Lower and Flot
Dump System	Roll back, hold and dump
Lift Cylinders	
Type	Double acting
No. of cylinders x Bore x stroke	2 150 x 860 mm
Dump cylinder	
Type	Double acting
No. of cylinders	1
Bore x stroke	160 x 410 mm



Tyres and Rims

Tyre (Standard)	23.50 x 25 ~ 20 PR Tubeless (Filled with liquid ballast)
Rims	
Type	Flanged type
Size	19.50 x 25



Steering System

Type	Articulated, full power steering 25° on either side.
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Steering Pump

Type	Vane Pump
Flow	320 litres/min @ 2000 rpm
Relief valve setting pressure	17.61 MPa (175kg/cm ²)

Steering cylinders

Type	Double acting
No. of cylinders	2
Bore x stroke	50 x 90 x 535 mm



Filtration

Engine	Replaceable micro paper element filter for lubrication as well as for fuel line is provided.
Transmission	Replaceable element type of filter is provided
Hydraulic system	Magnetic plug and replaceable element type filter is provided.

Service Capacities

Cooling system	45 litres
Fuel tank	185 litres
Engine	24 litres
Transmission (inclusive of drop box)	27 litres
Front axle	40 litres
Rear axle	30 litres
Brake oil tank	2.8 litres
Hydraulic tank	195 litres

Technical Data

Capacity	To carry a tyre mounted on rim weighing upto 3500kg. Tyre sizes from 18.00 x 25 to 36.00 x 51
Clamping span	1420 mm to 3380 mm
Hand Axial Rotation	360° continuous
Lateral Rotation	350°
Clamping pads	610 mm round cups with grip lugs
Lateral rotation speed	20 ~ 30 seconds
Axial rotation speed	10 seconds
Clamping action	Independently controlled
Clamping safety	
Lock	Safety check valves on clamping side of cylinder
Clamping force	19504 kg
Side shift action	200 mm total, 100 mm each side of centre line
Lift Height	3200 mm

Tyre Handler Hydraulic System

Pump type	Gear Type
Capacity	50 litres / min
Relief pressure	175 kg/cm ²
Hydraulic control	Five spool control valve having a flow rate of 50 litres/min with a relief setting of 175 kg/cm ² The oil to the control valve is supplied by carrier vehicle hydraulic system/auxiliary hydraulic system.

Counter Weight

Rear mounted counter weight
weighing 3000 kgs and tyres filled
with 75% Cacl₂ or Water.

Dimensions

Overall length	8360 mm
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Operating Mass

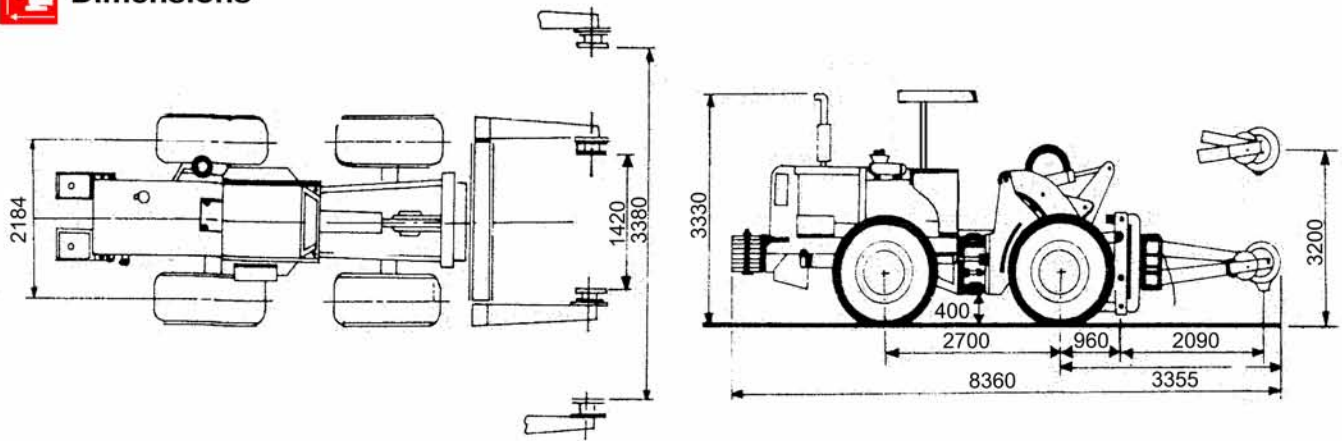
Operating mass	21,500 kg approx
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Standard Equipment

Ammeter, air pressure gauge, engine oil pressure gauge,
transmission oil pressure gauge, transmission oil
temperature gauge, hour meter, engine water temperature
gauge, Head lights and rear lights, foot throttle , fenders,
canopy, tool box, fire extinguisher, reverse light and alarm.



Dimensions



1. Illustrations may include optional equipment & accessories and may not include all standard accessories.
2. Materials and specifications are subject to change without notice.
3. All the specifications meet relevant ISO standards.



SINCE 1992

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