

BP100

PIPE LAYER



Salient Features :

- BS6D170-1 BEML Turbo-charged engine
- Power shift transmission
- Pilot operated hyd. system for counter weights and work attachment
- Wet type Hydraulically interlinked steering, clutches and brakes
- Conveniently located arm chair steering
- The Boom is welded box section & operated by wire cables
- Bolt-on type segmented sprockets
- Both the hydraulic winches mounted on RH side
- Automatic kick-out device for boom
- Maximum lifting capacity



Flywheel Power (net) : 310 kW (416 HP) @ 2000 rpm

Max. Lifting Capacity : As per lifting performance curve.

Operating Mass : 62,000 kg

BP100

PIPE LAYER

Salient Features :

BS6D170-1 BEML Turbo charged engine : For superb fuel economy and generous HP to weight ratio for wide range of pipe laying work.

Powershift transmission : Smooth and responsive power shift with single-lever control for instant speed and directional changes.

Pilot operated hydraulic system : Offers effortless fine control of hook, boom & counter weight through joy stick.

Hydraulically interlinked steering : Clutch and brakes provide excellent maneuverability during gradual and sharp turns.

Conveniently located arm chair steering : Control for enhanced operator comfort.

The boom : is welded box section and operated by wire cables. Track-roller frames are made of high-tensile steel for maximum rigidity.

Bolt-on type segmented sprockets : Permit quick on-site replacement without track removal.

Both the hydraulic winches mounted on RH : Side of the equipment for better visibility.

Dual speed operations for raising and lowering of work attachment.

Emergency lowering feature for hook operation.

Automatic kickout device for boom

Radiator, fuel tank, floor frame and the cabin: Are mounted on anti-vibration rubber cushions to isolate vibration and to reduce noise levels.



ENGINE

Make	BEML
Model	BS6D170-1
Type	Diesel, 4 stroke, water cooled, direct injection, turbocharged
Net Power (fhp)	310 kW (416 hp) @ 2000 rpm
Maximum torque	1780 N-m (181.5 kg-m) @ 1400 rpm
No of cylinders	6, inline
Bore & Stroke	∅ 170 x 170 mm
Displacement	0.023150 m ³ / 23.15 ℓ
Electricals	
Alternator	24 V, 45 A
Starting motor	24 V, 9.5 kW
Battery	2 x 12 V, 200 Ah

TRANSMISSION

Torque Converter		
Model	TCS46-1A	
Type	3 element, single stage, single phase	
Stall ratio	2.6	
Transmission		
Model	Planetary gear, Power Shift, 4 forward / 4 reverse	
Final Drive		
Type	Spur gear, Planetary type	
Lubrication	Splash type	
Total reduction	33.74	
Travel speeds m/sec (km/h)		
Range	Forward	Reverse
1st	0-0.92 (0-3.3)	0-0.89 (0-3.2)
2nd	0-1.42 (0-5.1)	0-1.39 (0-5.0)
3rd	0-2.36 (0-8.5)	0-2.35 (0-8.47)
4th	0-3.53 (0-12.7)	0-3.50 (0-12.6)

BRAKES

Type	Wet contracting band. Foot operated steering brakes with hydraulic booster for light-touch actuation and long service life. Brakes and steering clutches are interconnected for easy steering.
Parking Brake	Hand operated with mechanical linkage.

STEERING SYSTEM

Type	Armchair control. Wet multiple disc steering clutches are hydraulically actuated and require no adjustment. Brake & steering system are interconnected
Turning radius	4.1 m (Tractor only)

FILTER SYSTEM

Engine	Replaceable cartridge type filter for lubrication as well as for fuel line.
Transmission	One magnetic oil strainer and one replaceable element bypass filter is provided
Steering & Braking	Magnetic oil strainer is common to transmission, steering & braking system. Separate replaceable element type filter is provided for steering & braking
Hydraulic System	Magnetic plug & replaceable element type filter is provided

MASS

Shipping Mass (Basic tractor with attachment, lubricating hydraulic, cooling systems and 10% of fuel capacity)	62,000 kg
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STANDARD EQUIPMENT

- Hook & Boom Winches
- Counter weight mechanism with 8.0m boom with wire cables.
- Hydraulic track adjusters
- Adequate lighting system
- Std. Hexagonal cabin

OPTIONAL ATTACHMENTS

- Insulated Canopy
- Safe Load Indicator System
- Air conditioner with heater
- Longer Length Boom (9.3m)

HYDRAULIC SYSTEM

Hydraulic Pump (winch)

Type	Gear pump
Capacity	410 l/min
Relief pressure	13.73 MPa (140kg/cm ²) + 2.94 MPa (30 kg/cm ²)

Hydraulic pump (Counter weight)

Type	Tandem pump
Capacity	85 l/min + 25 l/min
Relief pressure	13.73 MPa (140kg/cm ²)

Hydraulic Cylinder (Counter weight)

Type	Double acting piston
No. of cylinders	2 cylinders
Bore x Stroke	∅ 120 x 582 mm

DIMENSIONS & OPERATING DATA

Overall length	5917 mm
Overall width	4931 mm
Overall height	8704 mm

Operating data

Pipe Laying equipment

Crane	See chart
Boom overhang	1.5 m to 8.0 m
Hook speed (1st layer)	Simultaneously operated
Raise - 1st	4.5 m/min
- 2nd	7.2 m/min
Lower - 1st	4.5 m/min
- 2nd	7.2 m/min

Boom

Type	Welded box section and operated by wire cables
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Length	8.0 m Std. (9.3 m optional)
Weight	2720 kg

Winch

Type	Hydraulically operated, two speed, reversible
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Driving System	Powered continuously by hydraulic pump
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Drum brake	Automatic braking system
Transmission	Built in planetary system

Winch drum

Hook (dia x width)	∅ 305 x 458 mm
Boom (dia x width)	∅ 305 x 458 mm

Wire rope

Hook (dia x length)	∅ 26 mm x 130 m
Boom (dia x length)	∅ 26 mm x 95 m

Counter weight

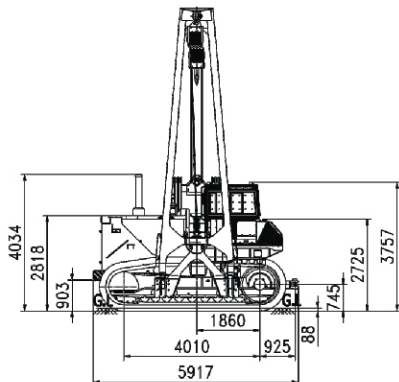
Type	Segmented plate type, Hydraulically actuated
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Weight	13,500 kg (including plates, Brackets and cylinder)
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Safety Equipment for boom	Automatic max. kick-out device
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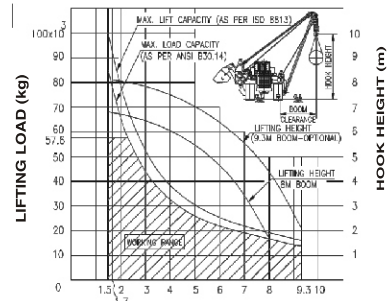
CABIN

Cabin	Hexagonal shaped, sound suppressive cabin provides excellent visibility and operator comfort. Additional glass provided on the roof improves visibility to implement systems like boom, hook etc.
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CHART

LIFTING PERFORMANCE CURVE



L - BOOM OVERHANG (M)

Lifting Performance (as per ISO8813)

Based on the firm level ground operation and standard 13,500 kg counter weight fully extended, 8.0 m boom (9.3 m optional), 26 mm dia wire rope, 48,000 kg min. breaking strength 8-part load line, 6-part boomline.

UNDER CARRIAGE

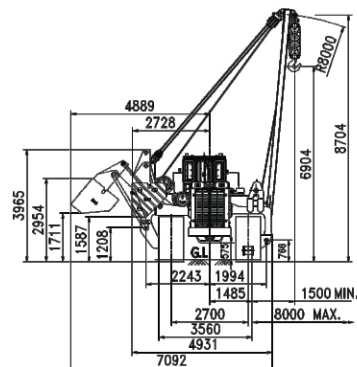
Suspension	Non-Oscillation type rigid suspension
Track Frame	Box section, high tensile strength steel construction
Track Rollers	9 nos. each side
Carrier Rollers	2 nos. each side
Track Shoes	44 nos. each side
Track Pitch	2700 mm
Grouser-Height	88 mm
Shoe width	860 mm (std)
Ground Pressure	88.3 kPa (0.90 kg/cm ²)
Ground contact area	6.450 m ²

COOLANT & LUBRICANTS CAPACITY (Refill)

System	Litres
Fuel Tank	760
Cooling System	180
Torque converter, Transmission, Bevel gear case, steering case	190
Final drive case (each side)	68
Hydraulic tank	180
Engine lub oil	43

INSTRUMENTATION

Dash Board	Aesthetically designed instrument panel for better readability.
Gauges / Warning	Baclit electrical gauge & audio
Indicator	Visual warning system
Wire harness	Newly designed wire harness with blade fuse links drip proof connectors and bicolour coded cables to improve safety and reliability of electrical systems.



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

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