

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



Flywheel Power (net) : 310 kW (416 HP) @ 2000 rpm
(As per ISO 9249)

Max. Lifting Capacity : As per lifting performance curve.

Operating Mass : 62,000 kg

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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 manoeuvrability 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.

Winches: Two speed compact planetary type hydraulically operated winches for easy raising & Lowering of work attachment.

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 as per ISO 9249
Maximum torque	1780 N-m (181.5 kg-m) @ 1400 rpm as per ISO 9249
No of cylinders	6, inline
Bore & Stroke	Ø 170 x 170 mm
Displacement	0.023150 m³ / 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		
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)



FILTRATION 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
- Integrated Hexagonal ROPS Cabin
- Boom Angle Indicator
- Boom Kick-out Mechanism

OPTIONAL ATTACHMENTS

- Air conditioner with heater
- Longer Length Boom (9.3m)
- Over hoist limit switch

HYDRAULIC SYSTEM

Hydraulic Pump (winch)

Type	Gear pump
Capacity	360 l/min
Relief Pressure	16.68 MPa (170 kg/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 (140 kg/cm ²)

Hydraulic Cylinder (Counter weight)

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

DIMENSIONS & OPERATING DATA

Overall length	5917 mm
Overall width	4931 mm
Overall height	9953 (8.0m boom) 10226 (9.3m boom)

Operating data

Pipe Laying equipment

Crane	See chart
Boom overhang	1.4 m to 8.0 m (1.7 m to 9.3 m)
Hook lift speed	

First Speed	2.8 m/min
Second Speed	6.0 m/min

Boom

Type	Welded box section and operated by wire cables
Length	8.0 m Std. (9.3 m optional)
Weight	2256 kg (2852 kg)

Winch

Type	Hydraulically operated, two speed, reversible
Driving System	Powered continuously by hydraulic pump

Drum brake	Automatic braking system
Transmission	Built in planetary system

Winch drum

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

Wire rope

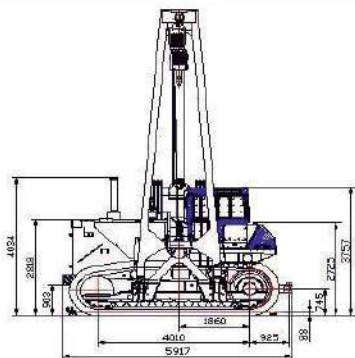
Hook (dia x length)	Ø 26 mm x 130 m
Boom (dia x length)	Ø 26 mm x 95 m

Counter weight

Type	Segmented plate type, Hydraulically actuated
Weight	15,587 kg (including plates, Brackets and cylinder)
Safety Equipment for boom	Automatic max. kick-out device

CABIN

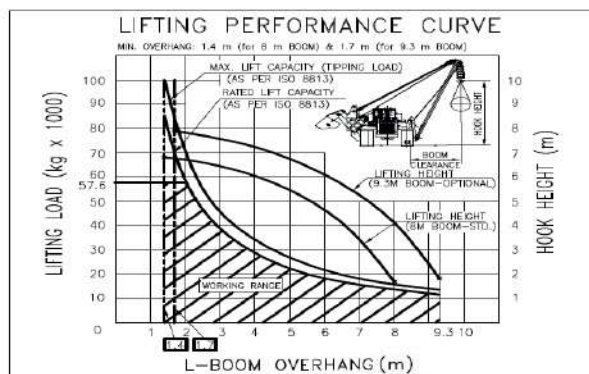
Cabin	Hexagonal shaped provides excellent visibility and operator comfort. Additional glass provided on the roof improves visibility to implement systems like boom, hook etc.
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Dimensions mentioned in bracket are for 9.3m Boom.

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

CHART



Lifting Performance (as per ISO8813)

Based on the firm level ground operation and standard 15,587 kg counter weight fully extended, 8.0 m boom (9.3 m optional), 26 mm dia wire rope, 48,114 kg min. breaking strength 8-part load line, 6-part boomline.

UNDER CARRIAGE

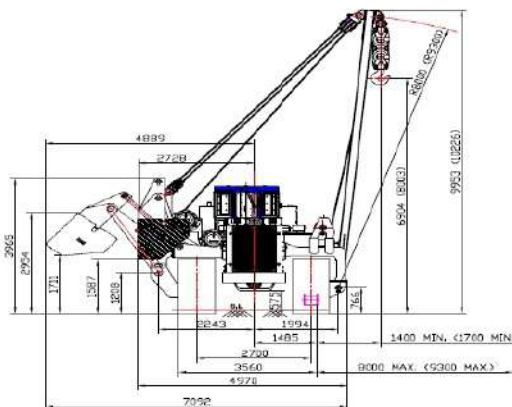
Suspension	Non-Oscillation type rigid suspension
Track Frame	Box section, high tensile strength steel construction
Track Rollers	9 nos. each side
Carrier Rollers	2 nos. each side
Track Shoes	44 nos. each side
Track Pitch	2700 mm
Grouser-Height	88 mm
Shoe width	860 mm (std)
Ground Pressure	88.3 kPa (0.90 kg/cm ²)
Ground Contact Area	6.9 m ²

COOLANT & LUBRICANTS CAPACITY (Refill)

System	Litres
Fuel Tank	708
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
Gauges / Warning Indicator	Backlit Electrical Gauges & Audio Visual Warning Over Hoist Warning & Boom Kick-out Warning
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.



बी ई एम एल लिमिटेड

BEML LIMITED

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

Business Network

Corporate Office

BEML Soudha, 23/1, 4th Main,
S.R. Nagar, Bangalore – 560 027

T + 91 80 22963240, 22963250

F + 91 80 22963278/516/280/164

E-mail: office.cpd@beml.co.in
corpcomm@beml.co.in

International Business Division

Flat No. E,F,G, H, 'Vandana' 11th Floor,
11, Tolstoy Marg, Connaught Place
New Delhi – 110 001

T + 91 11 23316500

F + 91 11 23325085

E-mail: mx@beml.co.in

Marketing Division

5th Floor, Unity Building,
J.C. Road, Bangalore – 560 002

T + 91 80 22963501/02/07/510/540

F + 91 80 22963541

E-mail: m@beml.co.in
mmd@beml.co.in

REGIONAL OFFICES

Bangalore

4th Floor, Unity Building, J. C. Road,
Bangalore - 560 002
Karnataka

T + 91 97413 51588
E-mail: mg@beml.co.in

Bilaspur

1-A, Industrial Area, Sector-C, Sirgitti,
Bilaspur - 495 223.
Chhattisgarh

T + 91 7752 252745, 252598
F + 91 7752 252065
E-mail: mv@beml.co.in

Neyveli

F-4, Dr. Rajendraprasad Road,
Block-27, Neyveli, - 607 803
Tamil Nadu

T/F + 91 4142 268517
T + 91 4142 265517 / 229392
E-mail: ma@beml.co.in

Dhanbad

Mouza - Kangalo, Amaghata,
Govindpur, KG Ashram Post, Dhanbad
Jharkhand - 828 109

T + 91 94711 92023
E-mail: mf@beml.co.in

Hyderabad

3-6-114, Street No.18, Himayat Nagar,
Hyderabad - 500 029
Telangana

T + 91 40 2322 7032 / 94907 93117
F + 91 40 2322 1794
E-mail: rm.hyderabad@beml.co.in

Kolkata

35/1A, Taratala Road,
Kolkata - 700 088.
West Bengal

T + 91 33 2401 5286 / 87 / 98 / 99
F + 91 33 2401 5288
E-mail: rm.kolkata@beml.co.in

Mumbai

32A, Bazar Road,
Near Jain Mandir, Bandra (West), Mumbai,
Maharashtra - 400 050

T + 91 22 26431875 / 26435875
F + 91 22 26423928
E-mail: rm.mumbai@beml.co.in

Nagpur

No 33, Cement Road,
Shivaji Nagar,
Nagpur - 440 010, Maharashtra.

T + 91 712 2248435 / 2248343
F + 91 712 2249997
E-mail: mn@beml.co.in

New Delhi

Flat E,F,G,H, 'Vandana', 11th Floor,
11, Tolstoy Marg, Connaught Place,
New Delhi - 110 001

T + 91 11 2344 3511 / 3528 / 2331 6500
F + 91 11 2332 5085
E-mail: ml@beml.co.in

Ranchi

206/D-1, Bhagirathi, (Behind NCC Campus)
Rameshwaram Colony, Bariatu Road,
Ranchi, Jharkhand - 834 009

T + 91 651 2540710 / 94311 08531
E-mail: mr@beml.co.in

Sambalpur

BEML Complex, NH-6, Panchagachhia,
Baraipalli Post, Sambalpur 768 006
Odisha.

T + 91 663 2521604 / 2521389
E-mail: mb@beml.co.in

Singrauli

PB No. 5, Jhingurdha Colliery,
Singrauli - 486 889
Madhya Pradesh.

T + 91 7805 272668 / 272318
F + 91 7805 272282
E-mail: rm.singrauli@beml.co.in

ACTIVITY CENTRES

Bhopal

Ground Floor, Hall No.1, Chittod Complex, Zone-1,
Maharanapratap Nagar (MP Nagar), Bhopal - 462 011

T + 91 755 2550711 / 8989459753

Panjim

BEML Limited, 5/4, Victor Building, Fontanhas, Mala,
Panjim - 403 001, Goa

T + 91 832 2225135 / 77986 87178

Itanagar

C/o. Tobom Riba, H-Sector, Papum
Itanagar - 791 113, Arunachal Pradesh

T + 91 94029 34205 / 88372 15852

Kochi

No. 39/2122, Chittoor Road, Emakulam South,
Kochi - 682 016

T + 91 484 2375138
E-mail: rm.kochi@beml.co.in

Maihar

Maihar, Madhya Pradesh

Mob: +91 79875 53768

Silapathar: Surya Vatika, Amritpur, Silapathar, Assam - 787 059 T + 91 95311 29059

DISTRICT OFFICES

Ahmedabad

99/100, BEML HOUSE, 2nd Street,
Azad Society, Ambawadi,
Ahmedabad - 380 015, Gujarat

T + 91 79 26445523 / 94264 13620
F + 91 79 26423950
E-mail: rm.ahmedabad@beml.co.in

Asansol

3, Bumpur Road,
Asansol - 713 304
West Bengal

T + 91 341 2252480
F + 91 341 2250601
E-mail: mca@beml.co.in

Bacheli

Behind Central Stores of NMDC Ltd.,
Depot 5, Bacheli - 494 553.
Chhattisgarh

T/F + 91 7857 230005
E-mail: rm.bacheli@beml.co.in

Bhilai

Room no 22/C, BSP Expansion Building,
Near Ispat Bhavan, Bhilai 490 001, Chhattisgarh

T + 91 788 2223880
F + 91 788 2221652
E-mail: mnb@beml.co.in

Bhubaneswar

252/A, Lewis Road
Bhubaneswar - 751 014
Odisha

T + 91 674 2434427 / 99373 83950
E-mail: mbb@beml.co.in

Chandrapur

Mamidwar, Tiles Factory Compound
Ghugus Road, Padoli
Chandrapur - 442 406 Maharashtra

T + 91 7172 287230
F + 91 7172 287560
E-mail: mnc@beml.co.in

Chennai

Flat No. 10, Supriya Estates,
No.3, Sterling Road, Nungambakkam,
Chennai - 600 034, Tamil Nadu,

T + 91 44 28220844
F + 91 44 28257319
E-mail: rm.chennai@beml.co.in

Guwahati

No.11, Ward 43, Hengrabani Road,
Ganesh Puri, Dispur,
Guwahati - 781 006 Assam

T + 91 361 2232966
F + 91 361 2232967
E-mail: rm.guwahati@beml.co.in

Hospet

No.1431, Manjunatha Complex,
Bhagat Singh Nagar, Opp. KSSIDC Indl. Estate,
Dam Road, Hospet - 583 203, Karnataka

T/F + 91 8394 230172
E-mail: rm.hospet@beml.co.in

Jammu

62C, Block D/C, Gandhi Nagar,
Jammu tawi - 180 004
Jammu and Kashmir

T + 91 191 2459 437
F + 91 191 2430 447
E-mail: mlj@beml.co.in

Kothagudem

Old Project Planning Department,
Near SCCL Corporate Office,
Kothagudem - 507 101, Telangana

T + 91 8744 245572
F + 91 8744 245530
E-mail: rm.kothagudem@beml.co.in

Leh

174-B, (Near Royal Enfield Showroom),
Housing Colony, Leh, Ladakh -194 101

T + 91 1982 258828 / 94198 71008
E-mail : mll@beml.co.in

Ramagundam

Near SCCL TTC, Jawahar Nagar,
Behind CISF Camp, Godavarikhani - 505 209.
Peddapalli Dist., Telangana

T + 91 8728 248299 / 94408 58441
E-mail: mhr@beml.co.in

Udaipur

20-B, Uchhab Bhavan, Bedla Road,
Fatehpura, Udaipur - 313 001.
Rajasthan

T + 91 294 2452054
E-mail: mww@beml.co.in

Visakhapatnam

No. 8-45-11, 4th Lane,
Vidyanagar Chinna Waltair Colony
Visakhapatnam - 530 003, Andhra Pradesh

T/F + 91 891 2754608 / 83320 54590
E-mail : rm.vizag@beml.co.in

www.bemlindia.in

Represented by:

बी ई एम एल लिमिटेड

BEML LIMITED

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