

BD85

CRAWLER DOZER



Salient Features :

- BEML Turbocharged BS6D125-1 Engine
- Power shift Transmission.
- Wet Steering clutches and Brakes
- Arm chair steering control
- Longer track for better stability and improved traction.
- Durable work attachment.
- Segmented sprockets
- Hexagonal ROPS-FOPS Cabin
- Feather touch joy stick control for work attachment gives fatigue free comfort for operator
- The parallel circuit hydraulic system design for precise and responsive control and for efficient simultaneous operation.



BD85

Flywheel Power (FHP) : 172 kW (230 HP) @ 2000 rpm

Operating Mass : 24340 kg

(With Straight tilt Dozer)

www.bemlindia.in

BD85

CRAWLER DOZER

Salient Features :

- **BEML BS6D125-1 Engine:** Engine is environment friendly as it ensures low level of vibration, noise and smoke.
- **Power Shift Transmission :** Smooth and responsive power shift with single lever control for instant speed and directional changes.
- **Control Panel:** Modular type gauges with cluster packaged monitoring system
- **Operator Comfort:** Ergonomically located armchair steering control with patent pending cushion mounting for floor and hexagonal ROPS-FOPS cabin for enhanced operator comfort and excellent visibility.
- **Longer track for better stability and improved traction.**
- **Wet multiple disc steering clutches and brakes :** Foot operated mechanical linkage assisted by hydraulic booster for light touch and easy actuation. Brakes and steering clutches are hydraulically inter connected for easy steering.
- Higher drawbar pull and higher speeds for enhanced productivity.
- **Durable work attachment :** High tensile steel blades of different configurations available to suit varying types of working conditions and applications.
- The attachment is sturdy in construction to withstand adverse ground conditions.
- Rugged driveline components for reliability and longer life.
- Joy stick control work attachment offers effort less pilot controls for all work attachment.



ENGINE

| | |
|--------------------|--|
| Make | BEML |
| Model | BS6D125-1 |
| Type | 6 inline, Diesel 4 stroke, water cooled, turbo charged, direct injection |
| Fly wheel Power | 172 kW (230 HP) @ 2000 rpm in accordance with IS:13116/ISO:9249 |
| Max. Torque | 1010 N-m (103 kg-m) at 1400 rpm |
| No. of Cylinders | 6, inline |
| Bore x Stroke | ∅125 x 150 mm |
| Displacement | 11.04 ℓ (0.01104 m ³) |
| ELECTRICALS | |
| Alternator | 24V, 55 A |
| Starting Motor | 24V, 7.5 kW |
| Battery | 2x12V, 200 Ah |



POWER TRAIN

| | |
|-------------------------|---------------------------------------|
| TORQUE CONVERTER | |
| Stall ratio | 2.2 |
| Type | 3 element, Single Stage, Single phase |
| TRANSMISSION | |
| Type | 3F/3R, Power shift Transmission |



FINAL DRIVE

| | | |
|-----------------------------------|-------------------------------------|------------------|
| Type | Spiral bevel gear, Double reduction | |
| Lubrication | Splash Type | |
| Total Reduction | 17.19 | |
| TRAVEL SPEEDS m/sec (km/h) | | |
| Range | Forward | Reverse |
| 1st | 0-0.972 (0-3.60) | 0-1.134 (0-4.20) |
| 2nd | 0-1.809 (0-6.70) | 0-2.187 (0-8.10) |
| 3rd | 0-3.186 (0-11.8) | 0-3.834 (0-14.2) |



HYDRAULIC SYSTEM

| | |
|---------------------------|---|
| Hydraulic Pump | |
| Type | Tandem gear pump |
| Capacity | 250 ℓpm+19 ℓpm |
| Relief Pressure | 13.73 Mpa (140 kg/cm ²)+2.94 Mpa (30 kg/cm ²) |
| Hydraulic Cylinder | |
| Type | Double acting piston type |
| Blade Lift | 2 Cylinder |
| Bore x Stroke | ∅ 120 mm x 1014 mm |
| Blade Tilt | 1 Cylinder |
| Bore x Stroke | ∅ 160 mm x 140 mm |

STANDARD EQUIPMENT

- Hydraulic Track Adjusters
- Air cleaner inner element lock
- Track roller guard (each side)
- Front Horn
- Lower guard (3 pieces)
- Fixed type draw bar
- Head light & rear light, Gauge lamp switches.
- Front pull hook
- In-line radiator
- Tool kit
- Audio visual backup alarm
- Lighting system (including 4 front and 1 rear lights)
- Straight Tilt Blade
- Seat belt with indicator
- Hexagonal ROPS-FOPS cabin

OPTIONAL ATTACHMENTS

- AC - Heater with Defroster
- Auto fire detection & suppression system
- Rear Vision system
- Multi Shank Ripper
- Angle dozer Blade attachment
- SU Blade
- Coal Dozer Blade
- ROPS Canopy with Sweeper for forestry application
- Warning Systems for operator's fatigue

CONTROL LEVERS

- Steering (Right)
- Steering (Left)
- Gear-shift
- Safety lock for gear shift
- Joy Stick for work attachment
- Fuel control lever
- Brake lock lever
- Safety lock for blade
- Safety lock for blade lever
- Transmission lock lever

METERS GAUGES (LCD DISPLAY)

- Engine oil filter clog
- Torque converter oil temperature
- Engine oil pressure
- Engine oil temperature
- Hour meter, Voltmeter
- Engine speed, Fuel level indicator
- Engine coolant temperature

Warning Indicators

- Engine oil filter clog
- Battery charging (indicator only)
- Engine oil pressure
- Radiator coolant level caution
- Dust indicator
- Smart reverse alarm with flasher unit
- Seat belt indicator

STEERING

| | |
|---------------------|---|
| Type | Wet, multiple disc hydraulic booster, hand operated |
| Min. Turning radius | 3.3 m |
| Steering Control | Arm Chain steering lever |

UNDER CARRIAGE

| | |
|---------------------|--|
| Suspension | Semi rigid Equalizer bar type |
| Track Frame | Box section, high tensile strength steel construction. |
| Track Pitch | 2000 mm |
| Track Rollers | 7 no. each side |
| Carrier Rollers | 2 no. each side |
| Track Shoes | 41 no. each side |
| Grouser Height | 65 mm |
| Shoe Type | Single grouser |
| Shoe width | 560 mm |
| Ground Pressure | 66.13 kPa (0.67 kg/cm ²) (Bare Tractor) |
| Ground contact Area | 3.6065m ² |

FILTRATION

| | |
|---|---|
| Engine | Replaceable cartridge type filter for lubrication as well as for fuel line. |
| Transmission, Torque converter Steering & Brake | Separate replaceable element type filter is provided. |
| Hydraulic System | Magnetic Iron particles separator & return line filters. |

MASS (approximate)

| | |
|---|----------|
| Operating Mass | 24340 kg |
| (Standard equipment with straight tilt dozer) | |
| Shipping Mass | 21420 kg |
| (Basic tractor with lubricants, Hydraulic system, cooling system and 10% of fuel tank capacity) | |

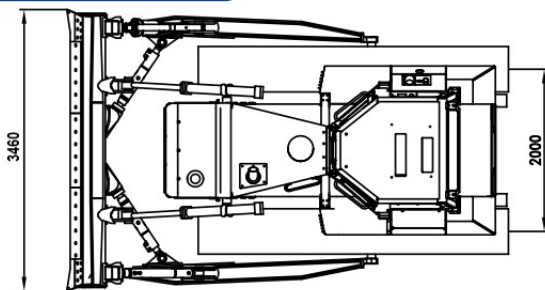
DOZER ATTACHMENT

| Dozer type | Straight | Angle | Semi-U | Coal |
|----------------------------|----------|---------|---------|---------|
| Overall length with dozer | 5915 | 6215 | 5950 | 6565 |
| Blade Length x Height | 3460 | 4260 | 3810 | 4450 |
| | x 1380 | x 1125 | x 1550 | x 1540 |
| Max. Lift above ground | 1350 | 1040 | 1385 | 1625 |
| Max. drop below ground | 620 | 740 | 620 | 545 |
| Max. tilt adjustment | 860 | 600 | 860 | - |
| Blade Capacity (Cum) | 4.5 | 4.31 | 7.50 | 10.10 |
| Additional ground pressure | 8.83 | 9.41 | 9.32 | 9.63 |
| kPa (kg/cm ²) | (0.087) | (0.096) | (0.095) | (0.098) |

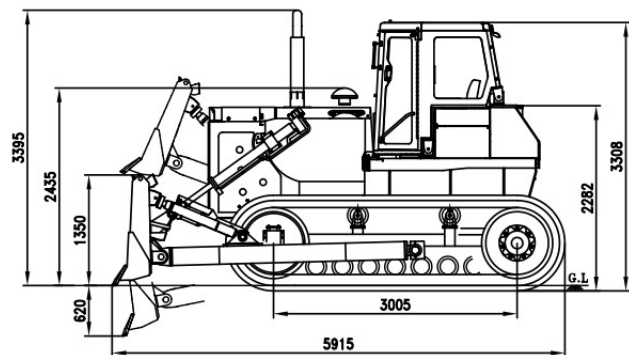
MASS in kg

| | | | | |
|------------------------|------|------|------|------|
| Dozer Equipment | 2990 | 3470 | 3440 | 3540 |
| Hydraulic control unit | 450 | 450 | 450 | 450 |

DIMENSIONS mm



Ground Clearance : 400 mm



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

SYSTEM FLUID CAPACITY

| System | Refill Capacity (in ltrs.) |
|--|----------------------------|
| Cooling System | 88 |
| Fuel Tank | 385 |
| Engine Oil Pan | 32 |
| Transmission, Torque Converter, Steering, Bevel Gear | 135 |
| Final Drive (each side) | 36 |
| Hydraulic Oil | 114.5 |

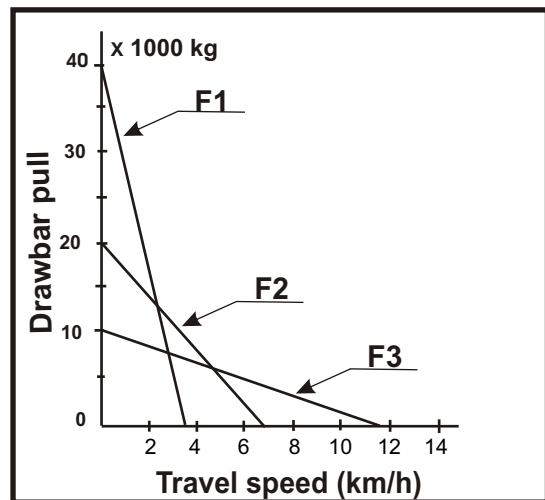
BRAKE

| | |
|----------------|---|
| Type | Wet, Contracting Band |
| Actuation Type | Foot operated Mechanical linkage assisted by hydraulic booster for light touch and easy actuation. Brakes and steering clutches are hydraulically interconnected for easy steering. |

CABIN

Hexagonal shaped, sound suppressive ROPS-FOPS cabin provides excellent visibility and operator comfort.

DRAW BAR PULL vs TRAVEL SPEED



Note: Maximum usable pull depends on traction and weight of equipped tractor.

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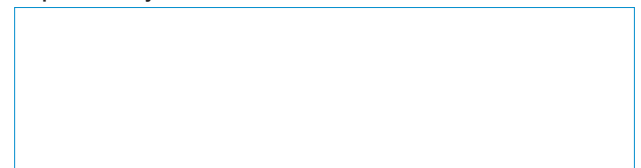
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बी ई एम एल लिमिटेड

BEML LIMITED

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

Crawler Dozers From BEML :

BD50

BD65-1

BD80

BD85

BD155

BD355

BD475

Form No. BD85/01/2020