

PIPELAYER

D85C-21

FLYWHEEL HORSEPOWER: 225 HP 168 kW/2000 RPM
MAX. LIFTING CAPACITY: 41000 kg 90,390 lb/402 kN
OPERATING WEIGHT 30050 kg 66,250 lb



Photo shown may include optional steel cab, long boom and other optional equipment.

- **Large lifting capacity:** The D85C-21's 40-ton maximum lifting capacity is the largest in its class.
- **Fewer control levers for better control:** Adoption of minimum number of controls assures fatigue-minimum operation. All winch, hook and boom actions are controlled by only three levers. Simultaneous hook and boom controls are also possible.
- **Greater stability:** Wide track gauge and long track length, plus easy-to-adjust counterweights provide machine stability.
- **Rugged engine:** Komatsu S6D125 diesel engine delivers a huge 225 HP (168 kW) for outstanding lifting performance. Direct injection fuel system saves on fuel costs and increases efficiency.
- **Komatsu TORQFLOW transmission:** TORQFLOW readily assures smooth and responsive power shifting, as well as instant direction changes.
- **Tough, job-proven undercarriage:** The same job-proven undercarriage used on Komatsu bulldozers are used in our pipelayers for easy to maintain, economical use.
- **Safety devices and wide range of options:** Automatic overwind alarm device warns operator of an overwind of the hook sheave. Load indicator offers ideal working range and rated lifting loads. Moment indicator warns the operator when the machine has reached its limits (i.e. lifting). To tailor your D85C-21 to your specific requirements, various attachments and optional equipment are provided.

KOMATSU

D85C SPECIFICATIONS



ENGINE

Komatsu S6D125 water-cooled, 4-cycle, overhead-valve turbocharged diesel engine of 6 cylinders with **125 mm 4.92"** bore x **150 mm 5.91"** stroke and **11.04 ltr 674 cu.in** piston displacement.

Flywheel horsepower (SAE J1349) :

..... **225 HP** 168 kW/2000 RPM

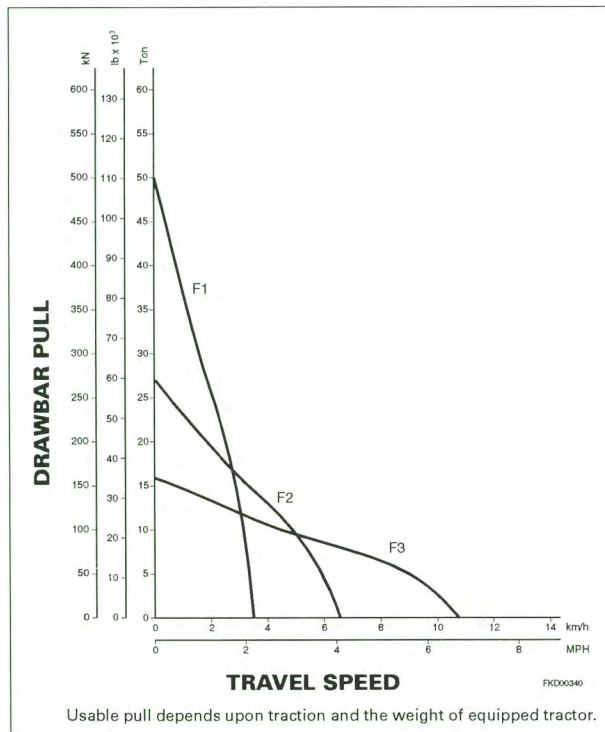
Max. torque **102 kgm** 738 lb.ft/**1000 Nm**/1400 RPM
Direct injection for fuel economy. Mechanical all-speed control governor. Gear-pump-driven forced lubrication with full-flow filters. Dry-type air cleaner with automatic dust evacuator for longer element service and dust indicator for simplified maintenance. Electrical 24-volt starting system.



TORQFLOW TRANSMISSION

The unique Komatsu TORQFLOW transmission consists of a water-cooled, 3-element, single-stage, single-phase torque converter and planetary-gear, multiple-disc clutch transmission. Hydraulically-actuated and force-lubrication for optimum heat dissipation. Offers single-lever control of speed (3 forward and 3 reverse) and direction changes. Optimum machine speed obtainable at all times to match job requirements. Gearshift lock lever and neutral safety switch prevent machine from accidental starts.

Travel speed	Forward	Reverse
1st	0 - 3.5 km/h 2.2 MPH	0 - 4.7 km/h 2.9 MPH
2nd	0 - 6.5 km/h 4.0 MPH	0 - 8.3 km/h 5.2 MPH
3rd	0 - 10.7 km/h 6.6 MPH	0 - 13.3 km/h 8.3 MPH



STEERING

Wet, multiple-disc, hand-operated steering clutches are hydraulically controlled and interconnected with wet, contracting-band, foot-operated steering brakes to allow easy, light-touch steering/braking actions.



FINAL DRIVE

Double-reduction of spur gears minimizes shock transmission to power-train components. Segmented sprocket are installed on the hub with bolts for easy on-field replacement.



UNDERCARRIAGE

Suspension Non-oscillating type
Track roller frame: Box-section, high-tensile-strength steel construction.

Rollers and idlers: Lubricated track, carrier and idlers are sealed with floating seals.

No. of track rollers (each side)..... 6
No. of carrier rollers (each side) 2

Track shoes: Assembled single-grouser shoes. Unique W-shaped dust seals for preventing entry of dust into pin-to-bushing clearance for extended service. Track tension easily adjusted with grease gun.

No. of shoes (each side)..... 38
Grouser height **72 mm 2.8"**
Shoe width (Std.) **610 mm 24.0"**
Ground contact area **33300 cm²** 5,161 sq.in
Ground pressure **0.90 kg/cm²** 12.80 PSI/**88.3 kPa**



PIPELAYING EQUIPMENT

Lifting capacity: With a **41000 kg** 90,390 lb/**402 kN** capacity, the largest in its class, the D85C-21 is ideal for operations in large-scale pipelaying sites which require laying of pipe more than 48 inches in diameter.

Hook: The adjustable two-speed hook is hydraulically controlled by winch for smooth, powerful lifting.

Hook speed (bare drum):

	Raise	Lower
Low	9.6 m/min 31.5 FPM	9.3 m/min 30.5 FPM
High	21.7 m/min 71.2 FPM	21.1 m/min 69.2 FPM

Boom: The welded, box-sectioned boom is made of high-tensile steel to take the punishment of heavy-duty loads. The wire-controlled boom has an automatic maximum stopper device which prevents excessive boom raising.

Winch: Hydraulically-controlled, double-drum, reversible type. Driven by wet, multiple-disc type clutch and transmission with high-low range lever and wet, multiple-disc brake.

Winch dimensions:

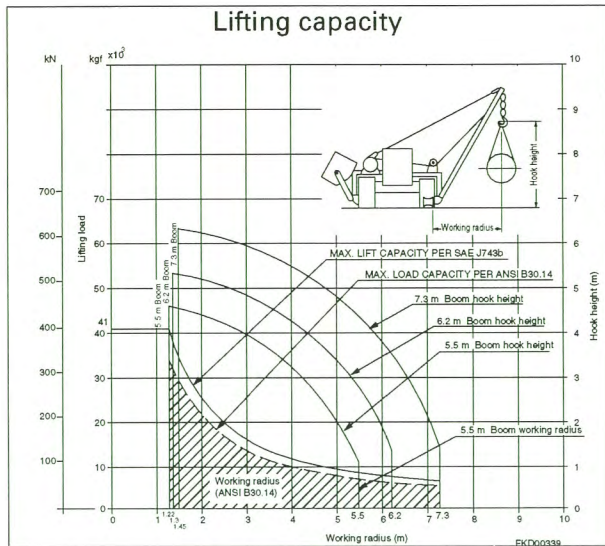
Hook drum (dia. x width) ... **250 mm x 280 mm** 9.8" x 11.0"
Boom drum (dia. x width)..... **250 mm x 125 mm** 9.8" x 4.9"

Cable capacity (dia. x length):

Hook (max.) **20 mm 0.79" x 120 m** 394'
Boom (max.) **20 mm 0.79" x 53 m** 174'
Counterweight: Segmented plate type of **1530 kg** 3,370 lb.
Total two plates. Hydraulically-controlled.
Total weight (include two plates, frame and hydraulic cylinders) **5995 kg** 13,220 lb

Boom equipment and weight:

	Boom length	Lifting capacity	Working radius	Boom weight	Attached cable capacity		Operating Weight
					Hook line	Boom line	
STD	5.5 m 18'1"	41000 kg 90,390 lb	1.22 - 5.5 m 4' - 18,1"	920 kg 2,030 lb	70 m 230'	50 m 164'	30050 kg 66,250 lb
	6.2 m 20'4"	38400 kg 84,660 lb	1.3 - 6.2 m 4'3" - 20'4"	1080 kg 2,380 lb	70 m 230'	50 m 164'	30210 kg 66,600 lb
OPT	7.3 m 23'11"	34350 kg 75,730 lb	1.45 - 7.3 m 4'9" - 23'11"	1220 kg 2,690 lb	70 m 230'	55 m 180'	30350 kg 66,910 lb



COOLANT & LUBRICANT CAPACITY (Refilling)

Coolant	79 ltr. 20.9 U.S. Gal
Fuel tank	450 ltr. 118.9 U.S. Gal
Engine.....	24 ltr. 6.3 U.S. Gal
Torque converter, transmission, bevel gear case and steering case.....	90 ltr. 23.8 U.S. Gal
Final drive (each side).....	51 ltr. 13.5 U.S. Gal
Winch.....	71 ltr. 18.8 U.S. Gal
Counterweight.....	22 ltr. 5.8 U.S. Gal



OPERATING WEIGHT (Approximate)

Operating weight including hook, **5.5 m** 18'1" boom, winch, counterweight, rated capacity of lubricants, coolant and fuel, and steel cab.

610 mm 24.0" shoe..... **30050 kg** 66,250 lb
 Operating weight with optional boom, see the table of boom equipment and weight.

STANDARD EQUIPMENT (-50°C SPECIFICATION)

• TORQFLOW transmission • 610 mm (24") single-grouser shoes • Hydraulic track adjusters • 24 V, 50 A alternator • 24 V, 11 kW electric starting motor • Decelerator pedal • Segmented sprockets • Front pull device • Suspension-type operator's seat • Dry-type air cleaner with automatic dust evacuator and dust indicator • 24 V (12 V x 2), 200 Ah batteries • 6-roller track frame • Lighting system (including one left side and two front lights) • Wet-type steering clutches and brakes • In-line radiator • Lower guard • Center track roller guards • Front bumper • 5.5 m (18'1") boom • Automatic maximum stopper device for boom • Double-drum, reversible -type winch • Segmented plate type, hydraulically-controlled counterweights • Hook • Rigid-type drawbar • Reversible fan • Combustion-type coolant and engine oil pan preheater, 30000 kcal/h • Electric-type intake air heater, 24 V 2.45 kW • Closed-type engine side covers • Metal-type radiator shutter • Felt-type battery warmer



CONTROL

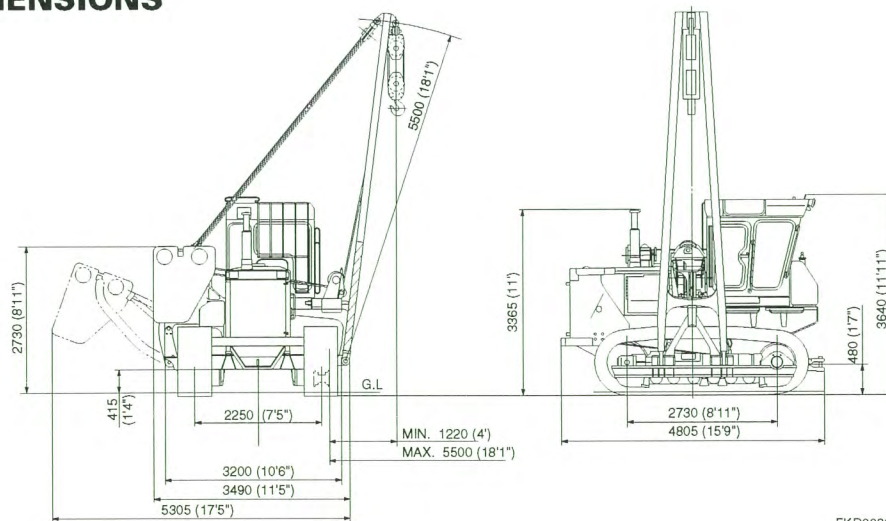
Controls are human-engineered for easy access and use. Single-lever control of travel speeds and directional changes. Two-lever controlled steering clutches are interconnected with steering brakes. Joint-pedal design for brakes allows easy one-foot braking actions.

All winch, hook boom movements are controlled by only three levers. Simultaneous hook and boom operations are possible. Interlock mechanism is built into the winch control lever for safer operation. Counterweight position control is next to the operator's seat.

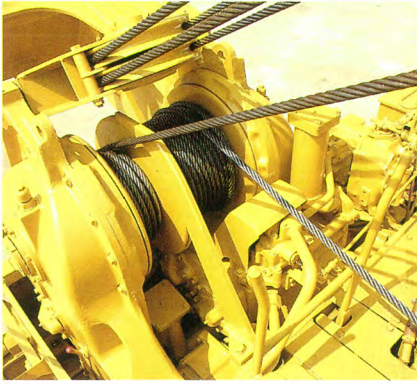


DIMENSIONS

unit:mm (ft.in)



Other features



Winch power train: Compact and light-weight winch has a wet, multiple-disc-type clutch and a transmission. The transmission has two independent power trains, allowing simultaneous control of hook and boom to assure safer and more efficient pipelaying work.

Easy winch control: Only three levers are required for controlling: one for transmission (high-low change lever), another for hook and the other for boom. All levers are hydraulically-actuated for light-touch controls. Since the hook power train and boom power train are independent of each other, simultaneous powered controls are possible to match with all job requirements. The hook lever has a free-fall position. Interlock mechanism is built into the high-low change lever. When the lever is positioned in neutral, the control levers for hook and boom are inoperable. The high-low change lever cannot be moved when either hook or boom is being raised or lowered, for successful operations.

Tough bulldozer undercarriage: The same undercarriage used in the high-performance Komatsu D85A bulldozer is used in the D85C-21 pipelayer. As a result, the D85C-21 takes shocks and stress in stride. Center track roller guards. Grooved-type floating seals keep lubricants in, and dirt out of track rollers and idlers.

EXTREME COLD WEATHER ARRANGEMENT

For operation at -50°C -58°F:

- Engine side cover, closed type
- Engine room quilting, cloth type (option)
- Radiator shutter, metal type, operated from cab
- Reversible fan
- Materials and components for extreme cold weather
- Large capacity cab heater: 4000 kcal/h x 3
- Double-glass window for cab

For low temperature starting:

(Allow machine to be started at -30°C -22°F. When preparing another warm batteries, machine to be started at -50°C -58°F)

- Large capacity starting motor: 24 V, 11 kW
- Large capacity batteries: 24 V (12 V x 2), 200 Ah
- Large capacity alternator: 24 V, 50 A
- Combustion-type coolant and engine oil pan preheater: 30000 kcal/h
- Intake air heater (Electric-type): 24 V, 2.45 kW
- Coolant heater (Electric-type): 230 V, 1.5 kW (option)
- Oil pan heater (Electric-type): 230 V, 600 W (option)

Attachments



Automatic overwind alarm device: Warns the operator when the hook sheave has been overwound, preventing broken wire rope from causing damage to vital components.

Momentum indicator: A safety device warns operator when the machine has reached its lifting limits and tells operator to adjust boom or counterweight positions.



Load & radius indicator: At a glance, the ideal working range and rated lifting loads according to the boom elevation angle are indicated, for assured safe pipelaying work.



Boom kickout device: When the boom comes to preset position, boom control lever automatically returns to neutral. This simplifies operation and increases productivity.

Optional equipment

- Double-glass windows type steel cab
Additional weight ...**750 kg** 1,650 lb
Dimensions:
Length **2070 mm** 6'10"
Width **1785 mm** 5'10"
Height **1460 mm** 4'9"
(floor to ceiling)

- Hot water-type cab heater with defroster: 4000 kcal/h x 3
- Electric-type coolant heater: 230 V, 1.5 kW
- Electric-type engine oil pan heater: 230 V, 600 W
- Radiator core protector
- Engine room quilting
- Fire extinguisher

- Ventilator
- First aid kit
- Rear view mirror
- Sunvisor
- Thermos bottle
- Rear lamp
- Inspection lamp
- Winch light
- Fog lamp
- Working light for boom
- Seat belt
- Tool kit
- Swing type drawbar
- **660 mm** 26" shoe
- **710 mm** 28" shoe

Materials and specifications are subject to change without notice.

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