PL61
Pipelayer

Engine		
Engine Model	Cat® C6.6 ACERT™	
Net Power – ISO 9249	93 kW	125 hp

Weights		
Operating Weight	17 000 kg	37,480 lb
Lift Capacity		
Lift Capacity at Tipping Point – ISO 8813	18 145 kg	40,000 lb

PL61 Pipelayer Features

Structure
Steel castings and heavy steel plates are welded to insure a rigid one-piece frame structure. Structures are designed to last throughout the extended service life.

Operator Station
The operator station offers excellent visibility and superior comfort. Optional features include fully adjustable air suspended seat, air conditioning with enclosed cab, electro-hydraulic controls, advanced monitoring system and low sound levels for comfortable operation.

Engine
The Cat C6.6 ACERT engine meets worldwide emission standards while providing outstanding engine performance, fuel efficiency and long-term durability.

Drive Train
The hydrostatic drive with electronic control provides precise modulation for quick and smooth operation, superior maneuverability and comfortable operation to help increase your productivity.

Heavy Duty Undercarriage
Heavy duty undercarriage is designed to give you extended wear life in abrasive conditions, on side slopes and in rocky, uneven terrain.

Contents

Engineered to exceed the most demanding working conditions. The PL61's power and versatility, combined with rugged components, are designed for tough and varied conditions. This machine offers you the reliability and durability you expect from Cat pipelayers.

Pipelayer

Integrated, Robust Components

Winches

The heavy-duty winch design works with machine hydraulics for greater productivity. Boom and hook draw works are driven by independent hydraulic winches. Oil-disc brakes provide smooth operation and positive retention of boom and hook positions. A modular, bolt-on design allows for fast replacement and easy field service. Interchangeable parts between hook and boom winch assemblies help reduce cost of downtime.

Counterweight

Counterweights are contoured to provide a low center of gravity and enhanced visibility to the front and side to aid productivity and job site safety. The counterweight is extended hydraulically for improved load balance and clearance. The PL61 has a rated lift capacity of 18 145 kg (40,000 lb).

Boom

The light weight, durable boom features high tensile strength steel construction for narrow structures and maximum visibility to the work area. Replaceable boom-mount bearings aid serviceability and long life.

Blocks and Hook

Updated block set profile enhances visibility to the pipe and helps take advantage of the full length of the boom. The heavy-lifting components include hook and boom blocks with sealed roller bearings, a forged hook with latch and serviceable handle, and ductile iron sheaves.

Drawbar

A robust drawbar tows a wide range of attachments for maximum versatility.

Operator Station

Designed for Productive Comfort

Caterpillar designs operator stations for maximum productivity. Operator comfort features and excellent visibility all around the machine help operators work more efficiently and contribute to job site safety. Customers may choose an Open Cab (OROPS) or an Enclosed Cab.

- The PL61 is equipped with an integrated Roll Over Protection Structure (ROPS) which provides greater operator protection with an open or enclosed cab.
- Additional mirrors further enhance the operator's visibility all around the machine.
- A fully adjustable air suspension seat, available in cloth or vinyl, features seat-mounted controls for operator comfort and ease of operation. A standard lumbar adjustment provides excellent lower back support. For more comfortable operation in cold weather, a heated cloth seat is available.
- Two 12-volt outlets are included to power devices like cell phones and laptop computers.

Implement and Steering Controls

Ergonomically Designed for Ease of Operation

Electro-hydraulic Seat-mounted Controls

Electro-hydraulic controls provide quick steering response, precise hook and boom control and comfortable, low-effort operation. Seat-mounted controls isolate vibrations from the operator, and provide independent seat and controls adjustment. Individual wrist pads and armrests can be adjusted independently for optimum comfort.

Pipelayer Control

Right joystick places all of the boom, hook and counterweight function control in one hand. Low-effort, ergonomically designed control handle allows simultaneous precise positioning of the load line and boom.

1) Quick drop control.

2) Two-speed hook button.

3) Thumb rocker controls the counterweight functions.

4) Joystick forward lowers the hook and joystick back raises the hook. Joystick left lowers the boom and joystick right raises the boom

Quick Drop Control

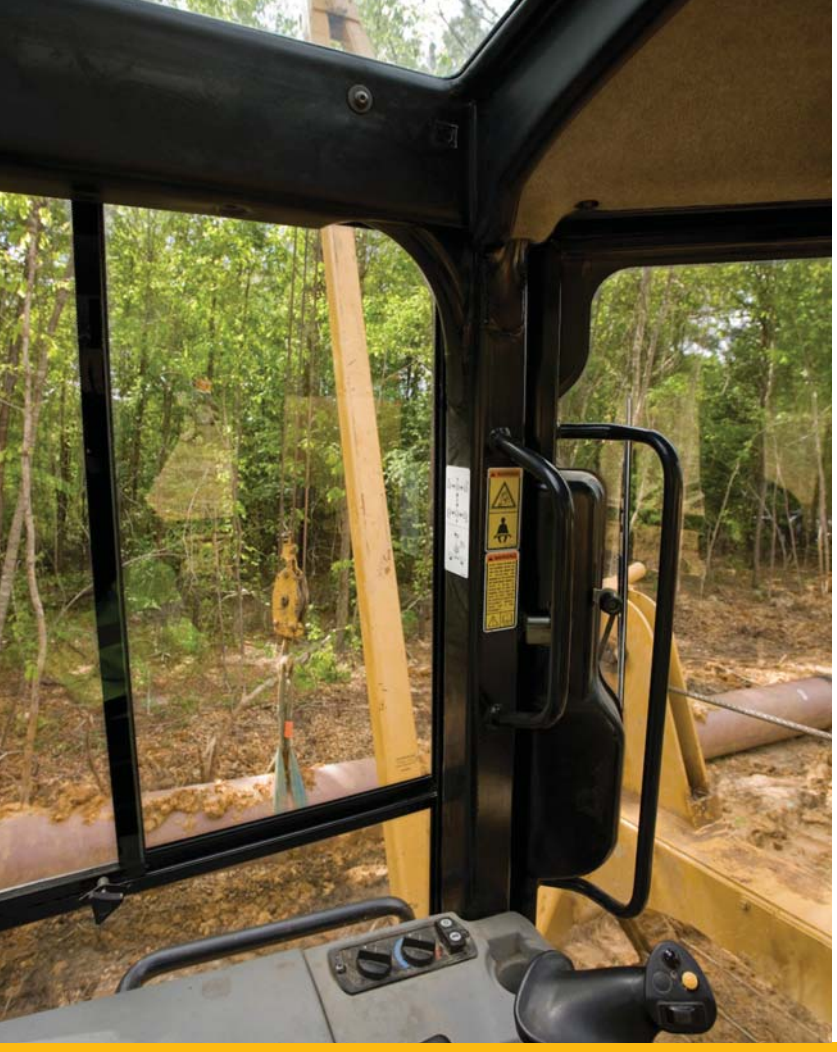
The quick drop control, when pushed, will allow the load on the hook to free fall to the ground. This control is to be used only in emergency situations where the load must be released immediately.

Brake and Decel Pedal

The PL61 features a single, combined hystat brake and decal pedal. Two braking configurations are available for the operator's preference. One configuration brakes the transmission only when the pedal is depressed; no engine decal will occur. The other option will slow the machine by simultaneously braking the transmission and reducing the engine speed.

Speed and Direction Control

The operator controls the speed of the machine and the direction of travel with a single joystick control located on the left console. One handed steering enhances operator comfort.



Enclosed Cab

Designed with Pipeline Productivity in Mind

The operator station features an ergonomic layout emphasizing simplicity, ease of use and comfort. Standard air conditioning with enclosed cab, generous legroom and superior visibility allow the operator to focus on the job. With more glass area, the operator station provides a clear view to the surrounding work site.

Within the integrated Roll Over Protection Structure (ROPS), glass area is maximized for excellent sight lines around the machine and to the trench to aid productivity and enhance job site safety. A skylight window provides a clearer view during inclement weather.

Engine and Power Train

Powerful Efficiency

Engine

The Cat C6.6 engine with ACERT Technology provides a compact design with big, heavy-duty engine features for outstanding durability, reliability and performance. The C6.6 utilizes Caterpillar engineered innovations that provide advanced electronic control, precision fuel delivery and refined air management, resulting in outstanding performance, lower emissions and years of dependable service.

Torque Rise

The direct injection electronic fuel system provides a controlled fuel deliver increase as the engine lugs back from rated speed. This results in increased horsepower below rated power. A combination of increased torque rise and maximum horsepower improves response and provides greater drawbar pull.

Hydrostatic Drive

The electronically controlled hydrostatic drive system automatically maintains engine speed to match the power requirements of the application for peak performance. The hydrostatic drive train also offers independent power and control of each track, for fast acceleration, infinitely variable speed control and on-the-go, direction changes for each track. The operator can command smooth “power turns” or even counter-rotation of the tracks for precise steering control in tight areas. The Cat hydrostatic drive system manages itself, freeing the operator to concentrate on using the Cat pipelayers superb agility, speed and maneuverability to do more productive work.

Indefinitely Variable Speed Control

Hydrostatic drive provides infinite speed control from 0 to 10 km/h (0 to 6.2 mph) in forward and reverse. This lets the operator select the optimum speed for ground and job conditions. It also eliminates power interruption during shifting.

Ground Speed Balancing

Hydrostatic drive provides a completely “step-less” transmission of power and automatically matches travel speed and implement loads for increased efficiency and easier operation.

Structure

Underlying Strength

The PL61 one-piece mainframe is engineered to handle the most demanding applications and is built to last throughout the extended service life. The mainframe is built to absorb high impact shock loads and twisting forces, and full box section frame rails are designed to keep components rigidly aligned. Equalizer bars are pinned in their center to the machine mainframe and at the ends to each track roller frame. Oscillation is locked out for greater stability in pipe laying applications.

Caterpillar uses robotic welding techniques in the assembly of the case and frames. The deep penetration and consistency of robotic welding insures quality for long life and durability.

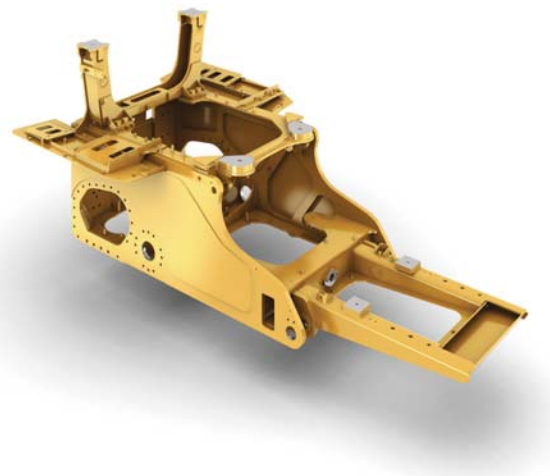
Undercarriage

Engineered for Performance

Heavy Duty Undercarriage

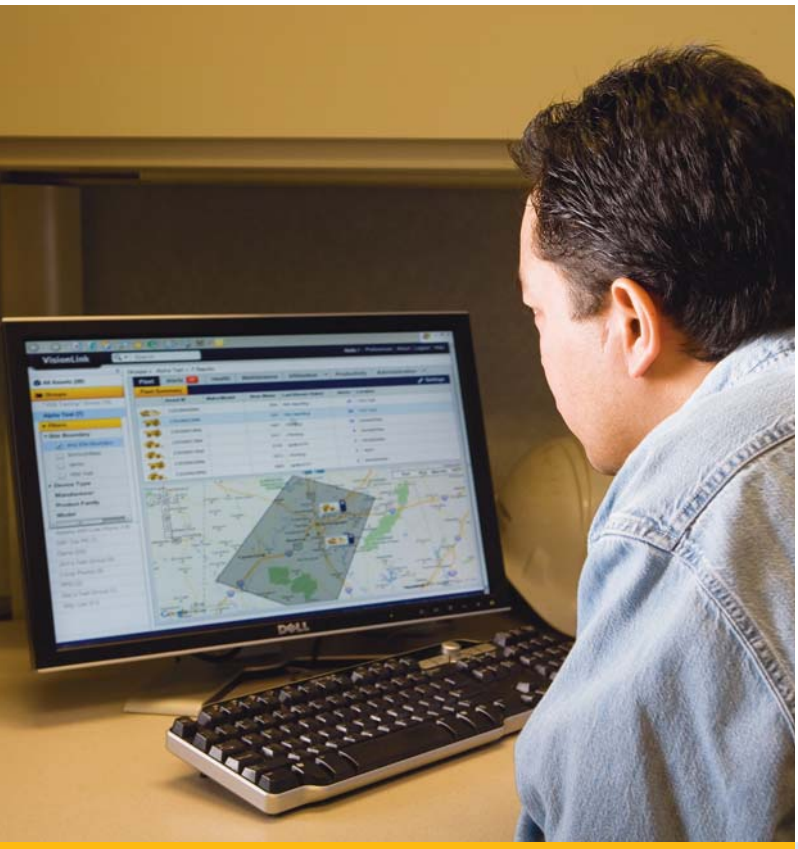
Heavy duty undercarriage is well-suited to aggressive applications like side slopes or working in rocky, uneven terrain. Components are designed for extended wear life in abrasive or high impact conditions.

The PL61 is available in narrow shipping width or Low Ground Pressure (LGP) configurations. The narrow track option allows the machine to be shipped under 3 m (9.8 ft) without disassembly. LGP is equipped with wide track shoes and a longer track frame for excellent flotation in soft underfoot conditions.



Integrated Technologies

Solutions to Make Work Easier and More Efficient



Cat Product Link™*

Remote monitoring with Product Link improves overall fleet management effectiveness. Product Link is deeply integrated into machine systems. Events and diagnostic codes, as well as hours, fuel, idle time and other detailed information are transmitted to a secure web based application, VisionLink™. VisionLink includes powerful tools to convey information to users and dealers, including mapping, working and idle time, fuel level and more.

**Product Link licensing not available in all areas.*

Load Monitor Ready

The PL61 is Load Monitor Indicator (LMI) ready from the factory and can accept regional LMI systems. New circuitry, integrated mounting hardware and the ready-mount power supply makes system installation simple. The LMI ready hydraulic system enables installation without opening the hydraulic system thus preventing contamination.

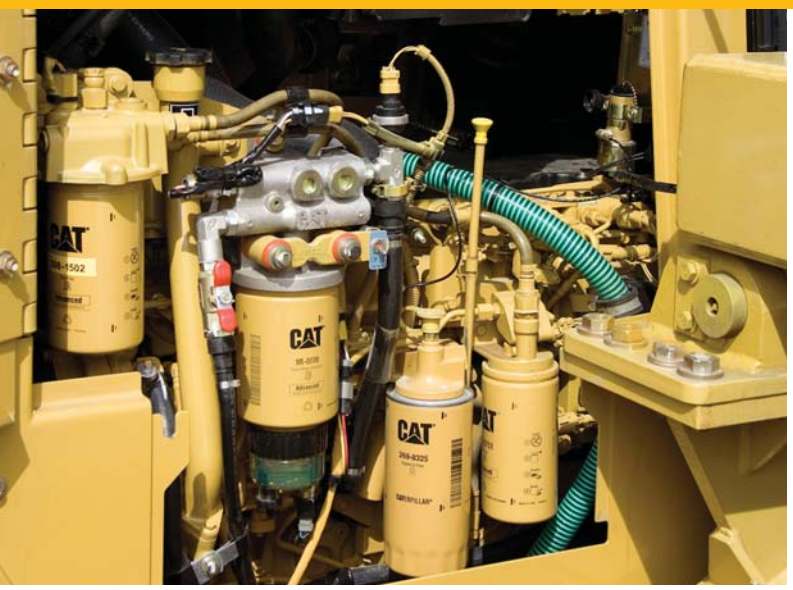
Sustainability

Thinking Generations Ahead

- Fuel efficient engine, and power saving features like constant net horsepower, help save fuel to reduce costs and lower emissions.
- Technologies like Product Link help improve overall efficiency, save fuel and fluids, and reduce equipment wear and tear.
- Longer service intervals help reduce parts and fluids consumption.
- Ecology drains make draining fluids more convenient and help prevent spills.
- Major components are built to be rebuilt, eliminating waste and saving customers money by giving the machine and/or major components a second – and even third – life.

Serviceability

More Productivity, Less Cost



Grouped service points and easy maintenance contribute to increased machine uptime for greater productivity and reduced costs.

Easy Diagnostics

The machine monitoring system provides instant feedback on the condition of operating systems, utilizing a three level warning system. The system can easily be upgraded by flashing software.

Cooling Package

Cores and fan are accessible from ground level, for easy cleaning and maintenance. Opening the radiator front grid will allow full access to the engine fan. The fan is mounted on a swing-out door that will provide effortless access to the cores.

Ecology Drains

Ecology drains provide a convenient method for draining fluids that saves time and helps prevent spills. They are included on the radiator (coolant), hydraulic tank and engine oil change.

Service Access

- All regular engine maintenance points are easily reached through the left-hand engine compartment to make service fast and easy.
- Engine doors are equipped with door handles and keyed locks for better protection.
- Enlarged service panel doors provide easier access to all maintenance locations.
- Remote-mounted fuel and hydraulic filters located within easy reach.
- Optional fast fill fuel tank available.
- Fuel tank fill, hydraulic oil sight gauge and fuel tank water and sediment drain are conveniently grouped within easy reach on the back of the machine.
- Pressure taps are grouped to allow for quick monitoring of the hydraulic system, and have ground-level access through the left service access door.

Safety

Designed with Protection in Mind

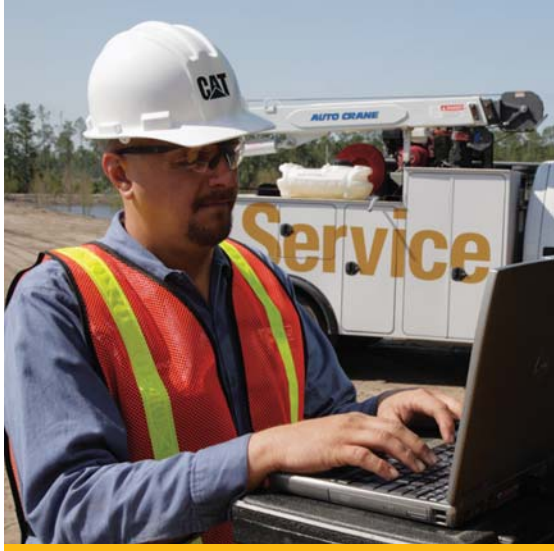
Job site safety is a key concern for pipeline customers, and Cat pipelayers are designed with features to help protect people in and around the machine.

Roll Over Protective Structure (ROPS)

Cat pipelayers are available with a Roll Over Protective Structure (ROPS) that is integrated into the machine structure at the factory. The structure's main purpose is to provide the operator protection in the event of a machine rollover. The ROPS also absorbs energy during a rollover, similar to the energy absorbed by crumple zones in automobiles. ROPS are available on both cab and canopy machines, and are designed to work with the design of the operator station to optimize sight lines around the machine.

Additional Safety Features

- PL61 pipelayers are Load Monitor Indicator (LMI) ready to help operators monitor loads for enhanced job site safety and efficiency.
- Grab handles help personnel maintain three points of contact while servicing.
- Quick drop release conveniently located on the right hand control.
- Additional mirrors provide even greater visibility around the machine.
- Cab and canopy machines include a roof window for visibility to the boom tip.



Renowned Cat Dealer Support

When Uptime Counts

Cat dealers excel at providing parts availability and equipment service to even the most remote areas. With more than 10,000 service technicians employed in over 3,000 Cat dealer locations around the world, Cat parts and service resources and capabilities are beyond compare.

– Manage costs with preventive maintenance programs like Custom Track Service, S•O•S℠ analysis, and guaranteed maintenance contracts.

– Stay productive with best-in-class parts availability.

Cat dealers can even help you with operator training to help you boost your profits.

And when it's time for machine replacement, your Cat dealer can help you save even more with Genuine Cat Reman parts. Receive the same warranty and reliability as new products at cost savings of 40 to 70 percent for power train and hydraulic components.

PL61 Specifications

Engine

Engine Model	Cat C6.6 ACERT	
Flywheel Power	93 kW	125 hp
Net Power – Caterpillar	93.2 kW	125 hp
Net Power – ISO 9249	93.2 kW	125 hp
Net Power – EEC 80/1269	93.2 kW	125 hp
Net Power – SAE J1349	92.1 kW	123.4 hp
Bore	105 mm	4.13 in
Stroke	127 mm	5 in
Displacement	6.6 L	403 in^3

- Engine ratings at 2,100 rpm.
- Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler and alternator.
- No derating required up to 3000 m (9,842 ft) altitude, beyond 3000 m (9,842 ft) automatic derating occurs.

Undercarriage

Number of Shoes – Each Side	40	
Track Rollers – Each Side	7	
Track Gauge – Narrow	1770 mm	70 in
Track Gauge – LGP	2000 mm	79 in
Track on Ground	2645 mm	104 in
Track Shoe Width – Narrow	560 mm	22 in
Track Shoe Width – LGP	760 mm	30 in
Ground Contact Area – Narrow	3 m^2	4,650 in^2
Ground Contact Area – LGP	4 m^2	6,200 in^2
Ground Pressure – Narrow	56.3 kPa	8.2 psi
Ground Pressure – LGP	43.4 kPa	6.3 psi

Weights

Operating Weight – Narrow Shoes	17 000 kg	37,480 lb
Shipping Weight – Narrow Shoes	16 070 kg	35,428 lb
Operating Weight – LGP	17 800 kg	39,242 lb
Shipping weight – LGP	16 870 kg	37,192 lb

Hydraulic Controls

Type	piston type, variable, two section	
Output – Maximum	540 L/min	142 gal/min
Relief Valve Setting – Counterweight	17 237 kPa	2,500 psi

Service Capacities

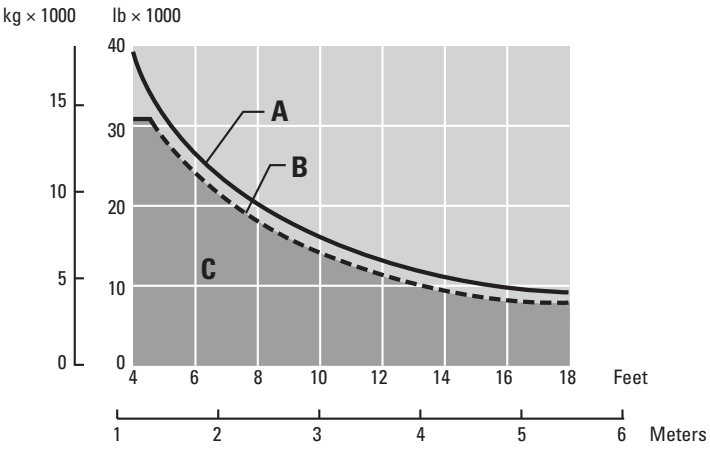
Fuel Tank	295 L	77.9 gal
Crankcase (with Filter)	16.5 L	4.35 gal
Final Drives (each)	23 L	6 gal
Cooling System	24.4 L	6.4 gal
Hydraulic Tank	58 L	15.3 gal

Air Conditioning System

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 1.3 kg of refrigerant which has a CO_2 equivalent of 1.859 metric tonnes.

Pipelaying Equipment

Lift Capacity	18 145 kg	40,000 lb
Boom Length	5.49 m	18 ft
Hook Winch Drum Diameter	216 mm	8.5 in
Boom Winch Drum Diameter	245 mm	9.63 in
Hook Winch Flange Diameter	398 mm	15.5 in
Boom Winch Flange Diameter	372 mm	14.63 in
Hook Winch Drum Length	254 mm	10 in
Boom Winch Drum Length	254 mm	10 in
Hook Winch Capacity – 16 mm (5⁄8 in) Diameter	72.85 m	239 ft
Boom Winch Capacity – 16 mm (5⁄8 in) Diameter	49.38 m	162 ft
Hook with Wire Rope Installed – 16 mm (5⁄8 in) Diameter	39.62 m	130 ft
Boom with Wire Rope Installed – 16 mm (5⁄8 in) Diameter	39.62 m	130 ft
Boom Line Speed	46 m/min	151 ft/min
Bare Drum Hook Speed (Lo)	33 m/min	108 ft/min
Bare Drum Hook Speed (Hi)	69.5 m/min	228 ft/min
2 Part Line Hook Speed (Lo)	16.5 m/min	54 ft/min
2 Part Line Hook Speed (Hi)	34.8 m/min	114 ft/min
3 Part Line Hook Speed (Lo)	11 m/min	36 ft/min
3 Part Line Hook Speed (Hi)	23.2 m/min	76 ft/min
Counterweight Extendible	2980 kg	6,570 lb



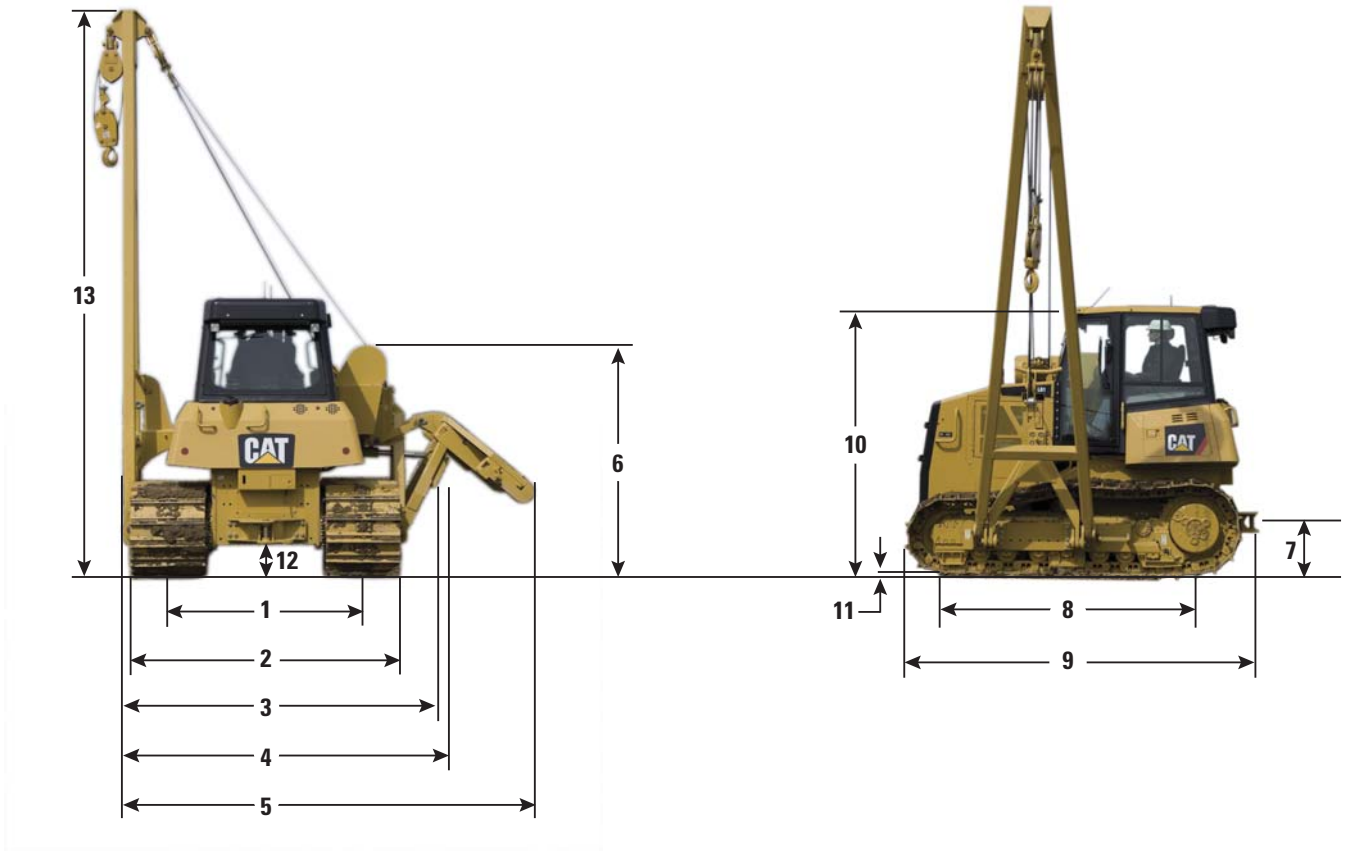
Load Overhang

Specified Equipment		
Diameter Wire Rope	16 mm	5/8 in
Rope Minimum Breaking Strength	183.3 kN	41,200 lb
3 Part Load Line		
3 Part Boom Line		
Counterweight Extended	1231 kg	2,714 lb
Standard Boom	5.49 m	18 ft
Total Operating Weight		
Narrow	17 000 kg	37,480 lb
LGP	17 800 kg	39,242 lb

A – Lift capacity at tipping point – ISO 8813
B – Rated load capacity – ANSI/ASME B30.14
C – Working range – ANSI/ASME B30.14

PL61 Specifications

PL61 Dimensions



	Tractor Dimensions	Narrow		LGP	
1	Track gauge	2000 mm	79 in	2000 mm	79 in
2	Width of tractor (standard shoes)	2560 mm	101 in	2760 mm	109 in
3	Width of tractor counterweight/boom removed	2917 mm	115 in	3117 mm	123 in
4	Width of tractor (counterweight retracted)	3000 mm	118 in	3200 mm	126 in
5	Width of counterweight extended	4426 mm	175 in	4414 mm	174 in
6	Machine height (tip of winch)	2454 mm	97 in	2454 mm	97 in
7	Drawbar height	483 mm	19 in	483 mm	19 in
8	Length of track on ground	2645 mm	104 in	2645 mm	104 in
9	Operating length	3784 mm	149 in	3784 mm	149 in
10	Height of machine				
	Height of top of stack	2914 mm	115 in	2914 mm	115 in
	Height to the top of the ROPS canopy/cab	2958 mm	116.5 in	2958 mm	116.5 in
11	Grouser height	48 mm	1.9 in	48 mm	1.9 in
12	Ground clearance (per SAE J1234)	360.4 mm	14.2 in	360.4 mm	14.2 in
13	Boom height [at SAE 1.22 m (4 ft) overhang]	6175 mm	243 in	6175 mm	243 in

PL61 Standard Equipment

Standard equipment may vary. Consult your Cat dealer for details.

ELECTRICAL
- Alarm, back up
- Alternator, 95 amp
- Batteries, heavy duty, 900 CCA
- Converter, 12V, 15 amp
- Diagnostic connector
- Lights, halogen (four front, two rear)
- Horn
- Starter, 24 volt

OPERATOR ENVIRONMENT
- Canopy, heated
- Cab, ROPS, with cloth seat or Canopy, ROPS heated with vinyl seat
- Seat belt, retractable
- Electro-hydraulic controls, adjustable seat mounted
- Foot rests
- Compact instrument cluster including:
  - Gauges for engine coolant temperature, hydraulic oil temperature and fuel level
  - 12 indicators
  - Digital display (ground speed, engine RPM and hour meter)
- Rotary throttle switch
- Electronic travel speed limiter
- Independent forward/reverse speed settings
- Mirror, rearview
- Auxiliary mirror for rear hitch/attachment
- 12V radio ready
- Power ports, 12V (2)
- Coat hook
- Storage compartment
- Cup holder
- Heavy duty rubber floor mat
- Single pedal combining deceleration and braking function

PIPELAYER
- Boom, 5.49 m (18 ft)
- Counterweight, extendible 2980 kg (6,570 lb)
- Hydraulics, pipelayer system

POWER TRAIN
- Engine, Cat C6.6 with ACERT Technology
  - Turbocharged and aftercooled
  - Common Rail Fuel system
- Aluminum bar plate cooling system (radiator, power train, aftercooler)
- Hydraulic demand fan
- Air cleaner with pre-cleaner, automatic dust ejection and under-hood intake
- Electric fuel priming pump with integrated fuel/water separator
- Dual path, electronic control, closed-loop hydrostatic transmission
- Under-hood muffler
- Starting aid, ether injection
- Antifreeze, extendible life coolant –37° C (35° F)

UNDERCARRIAGE
- Heavy duty undercarriage
- Idlers, conventional type, lifetime lubricated
- Track rollers, lifetime lubricated
- Carrier rollers
- Track adjusters, hydraulic
- Sprocket rim segments, replaceable
- Guards, end track guiding scrapers, idler
- Track, 40 sections
  - Standard configuration, 560 mm (22 in)
  - LGP configuration, 760 mm (30 in)

OTHER STANDARD EQUIPMENT
- Fuel tank and guard
- Hinged crankcase guard
- Lockable engine enclosures
- Idler guards
- Hinged radiator grill and swinging fan
- Front pull device
- Rigid drawbar
- Ecology drains (engine oil, power train and implement oil and engine coolant)
- Swing-out radiator fan
- S•O•S ports (engine, power train, hydraulics and engine coolant)

PL61 Mandatory Attachments and Optional Equipment

Mandatory attachments may vary. Consult your Cat dealer for details on available arrangements.

POWER TRAIN
- Oil change, high speed
- Fan, demand, reversing
- Antifreeze, extended life coolant, –50° C (–58° F)

OPERATOR ENVIRONMENT
- ROPS cab with sliding side windows and air conditioning
- Windshield washers and wipers
- Cat Comfort cloth air suspended seat with adjustable armrests
- Cab, polycarbonate windows
- Seat, vinyl, air suspension
- Seat, cloth, air suspension, heated

GUARDS
- Fuel tank, heavy duty
- Grill, radiator, heavy duty
- Crankcase, heavy duty
- Track guiding, center

STARTING AIDS
- Batteries, heavy duty
- Heater, engine coolant, 120V
- Heater, engine coolant, 240V

OTHER ATTACHMENTS
- Certification Group
- Fuel tank, fast fuel
- Enclosure, sound suppression
- LGP arrangement, wider frame
- Machine Security System
- Caterpillar Product Link
- Rotating beacon

FIELD INSTALLED ATTACHMENTS
- Radio

PIPELAYER OPTION
- Machine with no boom

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at **www.cat.com**

AEHQ6864-02 (03-2017)
Replaces AEHQ6864-01

Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment. See your Cat dealer for available options.