

330D L 330D LN

Hydraulic Excavators

CAT[®]



Cat[®] C9 Diesel Engine with ACERT™ Technology

Net Power (ISO 9249) at 1800 rpm	200 kW/270 hp
Operating Weight	35 300 to 37 500 kg
Maximum Travel Speed	5 km/h
Maximum Reach at Ground Level	11 830 mm
Maximum Digging Depth	8090 mm

330D L and 330D LN Hydraulic Excavators

The D Series incorporates innovations for improved performance, controllability and versatility.

Engine

The Cat® C9 engine with ACERT™ Technology offers better fuel efficiency and reduced wear. It works at the point of combustion to optimize engine performance and provide low exhaust emissions. By combining ACERT Technology with the new Economy Mode and Power Management, customers can balance the demands of performance and fuel economy to suit their requirements and application. **pg. 4**

Hydraulics

The hydraulic system has been designed to provide reliability and outstanding controllability with increased digging forces, lifting capacity and drawbar pull. The Cat Tool Control System provides enhanced flexibility. The Heavy Lift Mode maximizes lifting performance and maintains excellent stability. **pg. 5**

Operator Station

Provides maximum space, wider visibility and easy access to switches. The monitor is a full-color graphical display that allows the operator to understand the machine information easily. Overall, the new cab provides a comfortable environment for the operator. **pg. 6**

Environmentally Responsible Design

Quieter operation, lower engine emissions, less fluid disposal and cleaner service can help you meet or exceed worldwide regulations and protect the environment. **pg. 4**

SmartBoom™

More productive. Faster cycle times for truck loading and rock scraping. Maintains optimum hammering frequency for effective, steady productivity. **pg. 5**

Excellent controllability and reliability, impressive lift capacity, better fuel efficiency, simplified service and a more comfortable operator station to increase your productivity and lower your operating costs.



Electronic Control System

The compact, full-color, graphical display monitor displays machine, maintenance, diagnostic and prognostic information in twenty different languages. The new Economy Mode and Power Management is also selected from the monitor. To minimize sun glare, the monitor angle is adjustable.

pg. 7

Booms, Sticks and Linkage

Caterpillar excavator booms and sticks are built for performance and long service life. Three types of booms and six sticks are available, offering a range of configurations suitable for a wide variety of applications. The bucket linkage pins have been enlarged to improve reliability and durability. All booms and sticks are stress relieved. **pg. 10**

Structures

Caterpillar design and manufacturing techniques assure outstanding durability and service life from these important components. The 330D comes standard with grease lubricated tracks. Cat designed excavator undercarriage is stable, durable and low maintenance for good machine stability and transportability. **pg. 8**

Work Tools

A variety of work tools, including buckets, couplers, hammers, crushers, pulverizers, multiprocessors, shears and grapples are available. **pg. 11**

Service and Maintenance

Fast, easy service has been designed with extended service intervals, advanced filtration, convenient filter access, auto-cleaning of cooling package, user-friendly electronic diagnostics for increased productivity and reduced maintenance costs. **pg. 9**

Complete Customer Support

Your Cat dealer offers a wide range of services that can be set up under a customer support agreement when you purchase your equipment. The dealer will help you choose a plan that can cover everything from machine and attachment selection to replacement. **pg. 9**



Engine

Built for power, reliability, economy and low emissions.

Meeting regulations... Exceeding expectations.



Performance. The Cat C9 engine with ACERT Technology offers more engine power, and runs at lower speeds for better fuel efficiency and reduced wear.

Power Management. Optimal machine performance for each type of application. The operator can change the engine power on the monitor from standard to high. The high power mode is recommended for extremely productive areas and for hard digging applications.

Automatic Engine Speed Control.

The two-stage, one-touch control maximizes fuel efficiency and reduces sound levels.

Engine Controller. ADEM A4™ (Advanced Diesel Engine Management) electronic control module manages fuel delivery to get the best performance per liter of fuel. The controller uses sensors in fuel, air intake, exhaust and cooling systems and provides flexible fuel mapping, allowing the engine to respond quickly to varying application needs. It tracks engine and machine conditions while keeping the engine operating at peak efficiency.

Fuel Delivery. The Cat C9 features electronic controls that govern the mechanically actuated unit fuel injection system. Multiple injection fuel delivery involves a high degree of precision. Precisely shaping the

combustion cycle lowers combustion chamber temperatures, generating fewer emissions and optimizing fuel combustion. This translates into more work output for your fuel cost.

Cooling System. To reduce fan noise, the cooling fan is hydraulically driven with a variable speed control that manages fan speed to provide optimized cooling. A reversible fan is also offered as attachment to eject debris on demand or for programmed duration. The Cat C9 delivers a completely new layout that separates the cooling system from the engine compartment.

Air Cleaner. The radial seal air filter features a double-layered filter core for more efficient filtration and is located in a compartment behind the cab. A warning is displayed on the monitor when dust accumulates above a preset level.

Environmentally Responsible Design

Caterpillar machines not only help you build a better world, they help maintain and preserve the fragile environment.



Emissions. The Cat C9 with ACERT Technology introduces a series of evolutionary, incremental improvements that provide breakthrough engine technology built on systems and components developed by Caterpillar with proven reliability. The technology capitalizes on Cat expertise in four core engine systems: fuel, air, electronics and after treatment. By combining ACERT Technology with the new Economy Mode, customers can balance the demands of performance and fuel economy to suit their requirements and application. ACERT engines meet EC Stage IIIA emissions regulation.

Fewer Leaks and Spills. Engine oil and encapsulated hydraulic oil filters are positioned vertically and are easy to reach to minimize spillage. Service intervals are extended to reduce the times fluids are changed and handled. The hydraulic oil fine filtration system attachment extends the service interval from 2000 to 5000 hours. Compatible with Cat HEES hydraulic bio-oil for ecologically sensitive applications. Hydraulic oil service interval can be extended to 8000 hours with the S•O•S. program. Finally, the Cat Extended Life Coolant extends service up to 8000 h so there is less need for fluid disposal.

Hydraulics

Cat hydraulics deliver power and precise control to keep material moving.



Component Layout. The 330D hydraulic system and component locations have been designed to provide a high level of system efficiency. The main pumps, control valves and hydraulic tank are located close together to allow for shorter tubes and lines between components, which reduce friction loss, and pressure drops in the lines. The layout further provides greater operator comfort by placing the radiator on the cab side of the upper structure. This allows incoming air to enter the engine compartment from the operator side and hot air and corresponding engine sound to exit on the opposite side away from the operator. This reduces engine compartment heat and sound being transmitted to the operator.



Heavy Lift Mode. Maximizing lifting performance and boosting the lifting capability. Heavy loads can be easily moved in the full working range of the machine maintaining excellent stability.

Hydraulic Cross Sensing System. The hydraulic cross sensing system utilizes each of two hydraulic pumps to 100%, under all operating conditions. This improves productivity with faster implement speeds and quicker, stronger pivot turns.

Pilot System. The pilot pump is independent from the main pumps and controls the front linkage, swing and travel operations.

Boom and Stick Regeneration Circuit. Boom and stick regeneration circuit saves energy during boom-down and stick-in operation which increases efficiency, reduces cycle times and pressure loss for higher productivity, lower operating costs and increased fuel efficiency.



Electronic Control System.

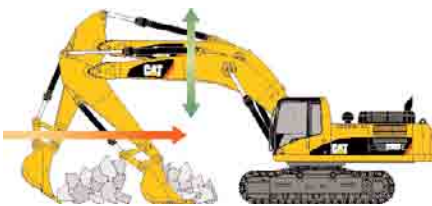
Ten hydraulic pump flow and pressure settings can be preset, eliminating the need to adjust the hydraulics each time a tool is changed.

Auxiliary Valve. The auxiliary valve is standard. Control circuits are optional, allowing for operation of high and medium pressure tools such as shears, grapples, hammers, pulverizers, etc.

Hydraulic Cylinder Snubbers.

Located at the rod-end of the boom cylinders and both ends of the stick cylinders to cushion shocks while reducing sound levels and extending component life.

SmartBoom. Reduces stress and vibrations transmitted to the machine and provides a more comfortable environment.



Rock Scraping. Scraping rock and finishing work is easy and fast. SmartBoom simplifies the task and allows the operator to concentrate on stick and bucket, while boom freely goes up and down without using pump flow.



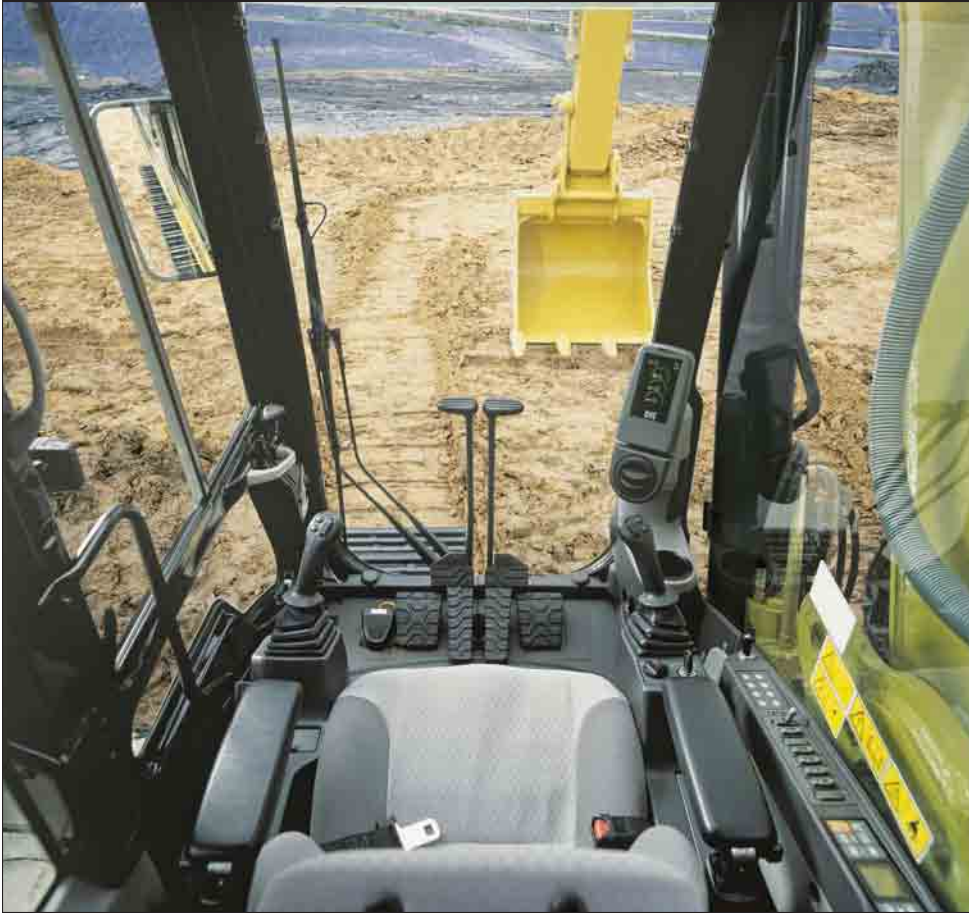
Hammer Work. The front parts automatically follow the hammer while penetrating the rock. Blank shots or excessive force on the hammer are avoided resulting in longer life for the hammer and the machine. Similar advantages with vibratory plates.



Truck Loading. Loading trucks from a bench is more productive and fuel efficient as the return cycle is reduced while the boom down function does not require pump flow.

Operator Station

Designed for simple, easy operation and comfort, the 330D allows the operator to focus on production.



Operator Station. The workstation is spacious, quiet and comfortable, assuring high productivity during a long workday. The air conditioner and attachment switches are conveniently located on the right-hand wall, and the key switch and throttle dial are on the right-hand console. The monitor is easy to see and maximizes visibility.

Seat. An optional air suspension seat is available in the 330D. The standard and optional seats provide a variety of adjustments to suit the operator's size and weight including fore/aft, height and weight. Wide adjustable armrests and a retractable seat belt are also included.

Climate Control. Positive filtered ventilation with a pressurized cab is standard. Fresh air or re-circulated air can be selected with a switch on the right console.

Hydraulic Activation Control Lever.

For added safety, this lever must be in the operate position to activate the machine control functions.

Controls. The 330D uses pilot operated control levers, positioned so the operator can operate with arms on the armrests. The vertical stroke is longer than the horizontal, reducing operator fatigue. The control lever grips are shaped to fit into the operator's hands. The horn switch and one-touch low idle switch are positioned on the left and right grip.

Implement Controls. Easy to handle joysticks with integrated push buttons and sliding switches control all implement and swing functions. The sliding switches provide modulated control for hydro-mechanical tools and are designed to increase operator comfort and reduce operator fatigue.



Skylight. A unique large polycarbonate skylight provides very good upward visibility, especially useful in above ground applications.

Windows. To maximize visibility, all glass is affixed directly to the cab eliminating the use of window frames. Choice of fixed or easy-to-open split front windshield meet operator preference and application conditions.

- 50/50 split front windshield allows both upper and lower portions to be stored in an overhead position.
- 70/30 split front windshield stores the upper portion above the operator. The lower front windshield features a rounded design to maximize downward visibility and improves wiper coverage.
- Both openable versions feature a one-touch action release system.
- The fixed front windshield is available in standard duty laminated glass or high impact resistant laminated glass.

Wiper. Designed to maximize visibility in poor weather conditions. The parallel wiper system covers almost the complete front window without leaving unwiped areas in the immediate line of sight of the operator.

Cab Exterior. The exterior design uses thick steel tubing along the bottom perimeter of the cab, improving the resistance of fatigue and vibration. This design allows the FOGS to be bolted directly to the cab, at the factory or as an attachment later, enabling the machine to meet specifications and job site requirements.

Electronic Control System

Manages the engine and hydraulics for maximum performance.



Consoles. Redesigned consoles feature a simple, functional design to reduce operator fatigue, ease of switch operation and excellent visibility. Both consoles have attached armrests with height adjustments.

Cab Mounts. The cab shell is attached to the frame with viscous rubber cab mounts, which dampen vibrations and sound levels while enhancing operator comfort.

Standard Cab Equipment. To enhance operator comfort and productivity, the cab includes a lighter, drink holder, coat hook, service meter, literature holder, magazine rack and storage compartment.

Monitor Display Screen. The monitor is a full color 400x234 pixels Liquid Crystal Display (LCD) graphic display. The Master Caution Lamp blinks ON and OFF when one of the critical conditions below occurs:

- Engine oil pressure low
 - Coolant temperature high
 - Hydraulic oil temperature high
- Under normal conditions or the default condition, the monitor display screen is divided into four areas; clock and throttle dial, gauge, event display and multi-information display.

Clock and Throttle Dial Area. The clock and the throttle dial position are in this area and the gas-station icon with green color is also displayed.

Gauge Area. Three analog gauges, fuel level, hydraulic oil temperature and coolant temperature, are displayed in this area.

Event Display Area. Machine information is displayed in this area with the icon and language.

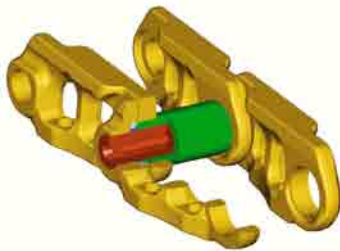
Multi-information Display Area. This area is reserved for displaying information that is convenient for the operator. The “CAT” logo mark is displayed when information to display does not exist.

Keypad. The keypad allows operator to select machine operation conditions and to set view preferences.



Structure

330D structural components and undercarriage are the backbone of the machine's durability.



Structures. Proven structural manufacturing techniques, assure outstanding durability and service life from these important components.

Robotic Welding. Up to 95% of the structural welds on a Caterpillar Excavator are completed by robots. Robotic welds achieve over three times the penetration of manual welds.

Carbody Design and Track Roller Frames. X-shaped, box-section carbody provides excellent resistance to torsional bending. Robot-welded track roller frames are press-formed, pentagonal units to deliver exceptional strength and service life.

Undercarriage. Durable Cat undercarriage absorbs stresses and provides excellent stability.

Rollers and Idlers. Sealed and lubricated track rollers, carrier rollers, and idlers provide excellent service life, to keep the machine in the field longer.

Undercarriage Options. Two undercarriage options, long (L) and long narrow (LN) allow you to choose the best machine for your application and business needs.

Long Undercarriage. The long undercarriage (L) maximizes stability and lift capacity. A long, wide and sturdy undercarriage offers a very stable work platform.

Long Narrow Undercarriage.

The long and narrow undercarriage (LN) provides the best choice when ease of transport is important while maintaining excellent lift capacity.

Tracks. The 330D comes standard with grease lubricated tracks. The track links are assembled and sealed with grease to decrease internal bushing wear, reduce travel noise and extend service life lowering operating costs.

Service and Maintenance

Simplified service and maintenance save you time and money.



Air Filter Compartment. The air filter features a double-element construction for superior cleaning efficiency. When the air cleaner plugs, a warning is displayed on the monitor screen inside the cab.

Ground Level Service. The design and layout of the 330D was made with the service technician in mind. Many service locations are easily accessible at ground level allowing critical maintenance to get done quickly and efficiently.

Pump Compartment. A service door on the right side of the upper structure allows ground-level access to the pump and pilot filter.

Capsule Filter. The hydraulic return filter, a capsule filter, is situated outside the hydraulic tank. This filter prevents contaminants from entering the system when hydraulic oil is changed and keeps the operation clean.

Diagnostics and Monitoring. Equipped with S•O•SSM sampling ports and hydraulic test ports for the hydraulic system, engine oil, and coolant. Electronic Technician (ET) tool is located behind the cab.

Anti-Skid Plate. Anti-skid plate covers top of storage box and upper structure to prevent slipping during maintenance.

Fan Guard. Engine radiator fan is completely enclosed by fine wire mesh, reducing the risk of an accident.

Greasing Points. A remote greasing block on the boom delivers grease to hard-to-reach locations on the front.

Radiator Compartment. Easy access to radiator, oil cooler, air-to-air aftercooler. Reserve tank and drain cock are attached to the radiator for simplified maintenance.

Auto-Cleaning Attachment. Automatically cleans the cooling package from dirt and fine debris by reversing the fan.



Extended Service Intervals. 330D service and maintenance intervals have been extended to reduce machine service time and increase machine availability.

Complete Customer Support

Cat dealer services help you operate longer with lower costs.



Machine Selection. Make detailed comparisons of the machines you are considering before you buy. What are the job requirements, machine attachments and operating hours? What production is needed? Your Cat dealer can provide recommendations.

Purchase. Consider the financing options available as well as day-to-day operating costs. This is also the time to look at dealer services that can be included in the cost of the machine to yield lower equipment owning and operating costs over the long run.

Customer Support Agreements. Cat dealers offer a variety of product support agreements, and work with customers to develop a plan the best meets specific needs. These plans can cover the entire machine, including attachments, to help protect the customer's investment.

Operation. Improving operating techniques can boost your profits. Your cat dealer has videotapes, literature and other ideas to help you increase productivity, and Caterpillar offers certified operator training classes to help maximize the return on your investment.

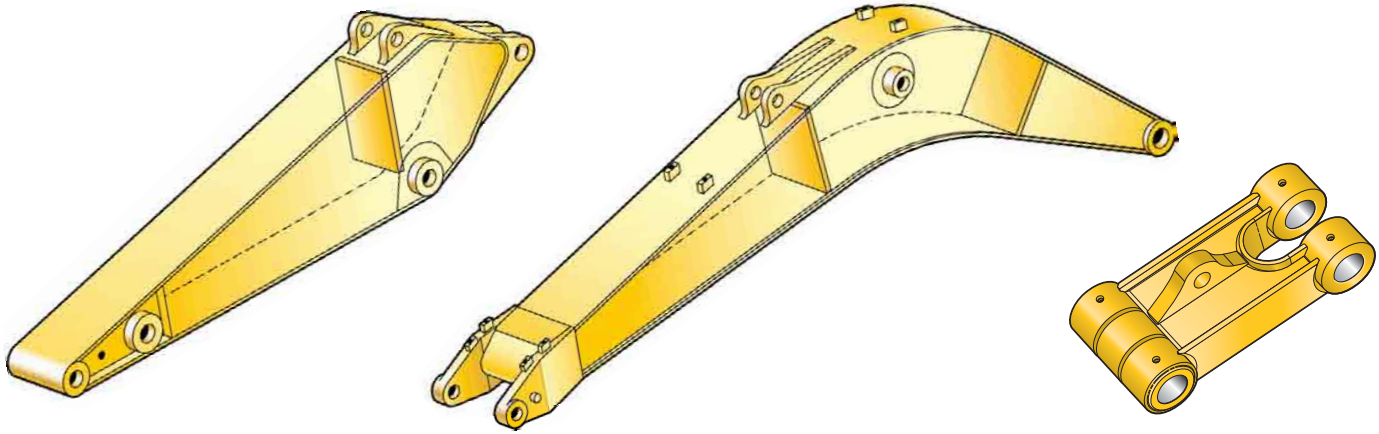
Product Support. You will find nearly all parts at our dealer parts counter. Cat dealers utilize a worldwide computer network to find in-stock parts to minimize machine downtime. You can save money with Cat remanufactured components.

Maintenance Services. Repair option programs guarantee the cost of repairs up front. Diagnostic programs such as Scheduled Oil Sampling, Coolant Sampling and Technical Analysis help you avoid unscheduled repairs.

Replacement. Repair, rebuild or replace? Your Cat dealer can help you evaluate the cost involved so you can make the right choice.

Booms, Sticks and Linkage

Designed for flexibility, high productivity, and efficiency in a variety of applications.



Front Linkage Attachments. Select the right combination of front linkage with your Cat dealer to ensure high productivity from the very start of your job. Three types of booms and six sticks are available, offering a range of configurations suitable for a wide variety of applications and offer a large combination of reach and digging forces for optimum versatility. All booms and sticks undergo a stress relieving process for greater durability.

Boom Construction. The booms have large cross-sections and internal baffle plates to provide long life durability.

Reach Boom. The reach boom (6500 mm) is designed to balance reach, digging force bucket capacity, offering a wide range of applications as digging, loading, trenching and working with hydraulic tools.

Mass Excavation Boom. The mass boom (6180 mm) is designed to provide maximum digging forces, bucket capacity and truck loading productivity.

Variable Adjustable Boom. It offers superb flexibility and versatility in the working envelope. Boom position can be adjusted from 102° when fully retracted to 158° when fully extended. With full extension, the working range gives both maximum dig depth, reach and working height. Equally, when the VA boom is retracted, it can work closer to its tracks, increase lifting capacity and work in confined areas.

Stick Construction. Sticks are made of high-tensile strength steel using a large box section design with interior baffle plates and an additional bottom guard to protect against damage.

Reach Sticks. Four lengths of reach sticks are available to suite a variety of applications. Reach sticks use DB and TB linkages.

- R3.9DB. Suited for high-capacity buckets used in trenching, excavation, and general construction work. Designed with enough reach and depth to match a large-capacity bucket and high digging force.
- R3.2DB. This stick provides the most versatile front linkage.
- R2.8DB. Suitable for the high-capacity buckets used in trenching, excavation and general construction work.
- R2.1TB1. This stick was designed for large capacity-construction work.

Mass Sticks. Two mass excavation sticks are available for higher digging forces and increased bucket capacity.

- M2.5TB1 and M2.1TB1. Designed for high volume earth moving, they deliver outstanding productivity.

Reach Sticks with VA Boom. The 3900, 3200, 2800 and 2150 mm sticks provide the necessary strength in digging, lifting and hammering applications with the VA boom.



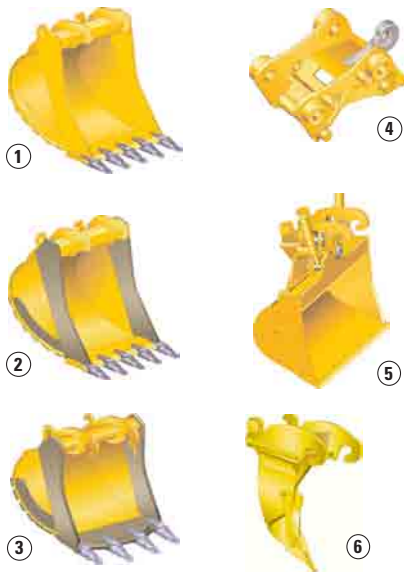
Bucket Linkage. Two bucket linkages (DB and TB) are available, with lifting eye on the power link.

Power Link. The new power link improves durability, increases machine-lifting capability in key lifting positions, and is easier to use compared to the previous lift bar design.

Linkage Pins. All pins used in front linkages have thick chrome plating, giving them high wear and corrosion resistance. The large diameter pins smoothly distribute the shear and bending loads to help ensure long pin, boom and stick life.

Work Tools

A wide variety of Work Tools help optimize machine performance. Purpose designed and built to Caterpillar's high durability standards.



- 1 Excavation (X)
- 2 Extreme Excavation (EX)
- 3 Rock (R)
- 4 Quick Coupler
- 5 Ditch Cleaning
- 6 Ripper



Work Tools. Caterpillar work tools are designed to function as an integral part of your excavator and to provide the best possible performance in your particular application. All work tools are performance-matched to Cat machines.

Quick Couplers. Quick couplers enable the operator to simply release one work tool and connect to another, making your hydraulic excavator highly versatile. Productivity also increases, as a carrier no longer needs to be idle between jobs. Caterpillar offers hydraulic and spindle quick coupler versions.

Buckets. Caterpillar offers a wide range of specialized buckets, each designed and tested to function as an integral part of your excavator. Buckets feature the new Caterpillar K Series™ Ground Engaging Tools.

Ripper. The Caterpillar TR-series ripper provides a powerful single point of penetration force to break out rock and other difficult to excavate material.

Hammers. Cat hammer series deliver very high blow rates, increasing the productivity of your tool carriers in demolition and construction applications. Wide oil flow acceptance ranges make the Caterpillar hammers suitable for a wide range of carriers and provide a system solution from one safe source.

Orange Peel Grapples. The orange peel grapple is constructed of high-strength, wear-resistant steel, with a low and compact design that makes it ideal for dump clearance. There are several choices of tine and shell versions.

Multi-Grapples. The multi-grapple with unlimited left and right rotation is the ideal tool for stripping, sorting, handling and loading. The powerful closing force of the grab shells combined with fast opening/closing time ensures rapid cycle time which translates to more tons per hour.

Multi-Processors. Thanks to its single basic housing design, the multi-processor series of hydraulic demolition equipment makes it possible to use a range of jaw sets that can handle any demolition job. The multi-processor is the most versatile demolition tool on the market.

Vibratory Plate Compactors. Cat compactors are performance-matched to Cat machines, and integrate perfectly with the Cat hammer line – brackets and hydraulic kits are fully interchangeable between hammers and compactors.

Shears. Cat shears provide superior and effective scrap processing, and are highly productive in demolition environments. Shears are compatible with a matching Cat excavator, and bolt-on brackets are available for either stick or boom-mounted options.

Bucket Specifications

Without Quick Coupler						Reach boom 6500 mm								ME 6180 mm								
						Linkage	Width	Weight*	Capacity (ISO)	Fill Factor	330D L				330D LN				330D L		330D LN	
											2150 mm	2800 mm	3200 mm	3900 mm	2150 mm	2800 mm	3200 mm	3900 mm	2150 mm	2550 mm	2150 mm	2550 mm
						mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm					
Excavation	DB	1000	1128	1.11	100	×					×				×	×	×	×				
	DB	1350	1337	1.62	100	×					×				×	×	×	×				
	DB	1500	1448	1.84	100	×					×				×	×	×	×				
	DB	1600	1506	1.99	100	×					×			N	×	×	×	×				
	DB	1650	1535	2.07	100	×					×			N	×	×	×	×				
	DB	1700	1563	2.14	100	×					×			N	×	×	×	×				
	DB	1800	1621	2.29	100	×				N	×		N	N	×	×	×	×				
	TB	1500	1728	1.93	100		×	×	×	×		×	×	×								
TB	1700	1906	2.24	100		×	×	×	×		×	×	×									
Extreme Excavation	DB	1350	1470	1.62	100	×					×				×	×	×	×				
	DB	1500	1565	1.84	100	×					×			N	×	×	×	×				
	DB	1600	1667	1.99	100	×					×			N	×	×	×	×				
	DB	1650	1698	2.07	100	×					×			N	×	×	×	×				
	DB	1700	1730	2.14	100	×				N	×			N	×	×	×	×				
	TB	1700	1933	2.24	100		×	×	×	×		×	×	×								
Rock	DB	1000	1326	1.11	90	×					×				×	×	×	×				
	DB	1650	1840	2.07	90	×					×			N	×	×	×	×				
	TB	1500	1885	1.93	90		×	×	×	×		×	×	×								
	TB	1800	2156	2.40	90		×	×	×	×		×	×	×								
Maximum load in kg (payload plus bucket)						5571	5013	4723	4123	4977	4470	4232	3680	6052	5511	5420	4914					
With Quick Coupler																						
Excavation	DB	1000	1112	1.11	100	×					×				×	×	×	×				
	DB	1350	1318	1.62	100	×					×				×	×	×	×				
	DB	1500	1428	1.84	100	×					×			N	×	×	×	×				
	DB	1600	1487	1.99	100	×				N	×		N	N	×	×	×	×				
	DB	1650	1516	2.07	100	×				N	×		N	N	×	×	×	×				
	DB	1700	1544	2.14	100	×				N	×	N	N	N	×	×	×	×				
	DB	1800	1601	2.29	100	×			N	N	×	N	N	N	×	×	×	×				
	TB	1500	1627	1.93	100		×	×	×	×		×	×	×								
TB	1700	1801	2.24	100		×	×	×	×		×	×	×									
Extreme Excavation	DB	1350	1451	1.62	100	×					×			N	×	×	×	×				
	DB	1500	1546	1.84	100	×				N	×			N	×	×	×	×				
	DB	1600	1648	1.99	100	×				N	×		N	N	×	×	×	×				
	DB	1650	1680	2.07	100	×				N	×	N	N	N	×	×	×	×				
	DB	1700	1710	2.14	100	×				N	×	N	N	N	×	×	×	×				
TB	1700	1822	2.24	100		×	×	×	×		×	×	×				N					
Rock	DB	1000	1309	1.11	90	×					×				×	×	×	×				
	DB	1650	1821	2.07	90	×				N	×		N	N	×	×	×	×				
	TB	1500	1772	1.93	90		×	×	×	×		×	×	×								
	TB	1800	2043	2.40	90		×	×	×	×		N	×	×				N				
Maximum load in kg (payload plus bucket)						5071	4543	4253	4653	4477	4000	3762	3210	5552	5011	4920	4414					

* Bucket weight including penetration plus tips



Max. Material Density
1200 kg/m³



Max. Material Density
1500 kg/m³



Max. Material Density
1800 kg/m³



Not recommended



Not compatible

Work Tools Matching Guide

Without quick coupler		Reach boom 6500 mm								ME 6180 mm				
		330D L				330D LN				330D L		330D LN		
		2150	2800	3200	3900	2150	2800	3200	3900	2150	2550	2150	2550	
Hammers	H130 S, H140D S, H160D S													
Multiprocessors	MP20 CC, CR, PP, PS, S, TS	N					N				N	N	N	N
	MP30 CC, CR, S				N				N					
	MP30 PP				N			N	N	N				
	MP30 PS				N				N	N				
	MP30 TS			N	N		N	N	N	N				N
Crushers and Pulverizers	VHC-40	N					N				N	N	N	N
	VHC-50				N									
	VHP-40	N					N				N	N	N	N
	VHP-50				N									
Hydraulic Shears	S325	N					N				N	N	N	N
	S340	N	N	N	N		N	N	N	N		N	N	N
	S365B*													
Mechanical Grapples	G115	N					N				N	N	N	N
	G125				N				N	N				
Multi Grapples	G320	N					N				N	N	N	N
	G330				N									
Vibratory Plate Compactor	CVP110													
Clamshell Buckets (rehandling)	GOS-45 970													
	GOS-45 1120													
	GOS-45 1270													
	GOS-45 1580													
	GOS-45 1710													
	GOS-45 2020										N			
	GOS-45 2340				N			N	N	N				
	GOS-50 1200													
	GOS-50 1450										N			
	GOS-50 1700									N	N			
	GOS-50 1950			N	N			N	N	N				
	GOS-50 2200		N	N	N			N	N	N				N
	GOS-50 2450	N	N	N	N			N	N	N		N	N	N
Orange Peel Grapples	5 tines	GSH22B 600												
		GSH22B 800												
		GSH22B 1000										N		
		GSH22B 1250										N		
	4 tines	GSH22H 600, 800												
		GSH22H 1000												
		GSH22H 1250												

* Boom mounted

With quick coupler

Quick Couplers	CW-45													
	CW-45S													
Hammers	H130 S, H140D S, H160D S													
Multiprocessors	MP20 CC, CR, S	N					N					N	N	N
	MP20 PP, PS, TS	N					N					N	N	N
	MP30 CC, CR, S			N	N		N	N	N	N				N
	MP30 PP		N	N	N		N	N	N	N			N	N
	MP30 PS		N	N	N		N	N	N	N				N
	MP30 TS	N	N	N	N		N	N	N	N				N
Crushers and Pulverizers	VHC-40	N					N					N	N	N
	VHC-50			N	N		N	N	N	N				N
	VHP-40	N					N					N	N	N
	VHP-50				N			N	N	N				N
Hydraulic Shears	S325	N					N				N	N	N	
Mechanical Grapples	G115	N					N					N	N	N
	G125				N				N	N				N
Multi Grapples	G320	N					N							N
	G330				N			N	N	N				
Vibratory Plate Compactor	CVP110													

360° Working range

Quick coupler match

Max. Material Density 1200 kg/m³

Over the front only

N Not recommended

Max. Material Density 1800 kg/m³

Max. Material Density 3000 kg/m³

Engine

Cat C9 with ACERT Technology

Net Power at 1800 rpm

ISO 9249	200 kW/270 hp
----------	---------------

80/1269/EEC	200 kW/270 hp
-------------	---------------

Bore	112 mm
------	--------

Stroke	149 mm
--------	--------

Displacement	8.8 liters
--------------	------------

- All engine horsepower (hp) are metric including front page.
- The C9 engine meets Stage IIIA emission requirements.
- Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler, and alternator.
- Full engine net power up to 2300 m altitude (engine derating required above 2300 m).

Sound

Operator Sound

- The operator sound level measured according to the procedures specified in ISO 6394:1998 is 78 dB(A), for cab offered by Caterpillar, when properly installed and maintained and tested with the doors and windows closed.
- Hearing protection may be needed when operating with an open operator station and cab (when not properly maintained or doors/windows open) for extended periods or in noisy environment.

Exterior Sound

- The labeled spectator sound power level measured according to the test procedures and conditions specified in 2005/88/EC is 105 dB(A).

Cab/FOGS

Cab/FOGS meets ISO 10262.

Hydraulic System

Main System

Maximum flow	2 x 280 l/min
--------------	---------------

Maximum pressure	
------------------	--

Normal	350 bar
--------	---------

Heavy lift	360 bar
------------	---------

Travel	350 bar
--------	---------

Swing	280 bar
-------	---------

Pilot System

Maximum flow	43 l/min
--------------	----------

Maximum pressure	39 bar
------------------	--------

Boom Cylinder

Bore	150 mm
------	--------

Stroke	1440 mm
--------	---------

Stick Cylinder

Bore	170 mm
------	--------

Stroke	1738 mm
--------	---------

DB Family Bucket Cylinder

Bore	150 mm
------	--------

Stroke	1151 mm
--------	---------

TB1 Family Bucket Cylinder

Bore	160 mm
------	--------

Stroke	1356 mm
--------	---------

Machine and Major Component Weights

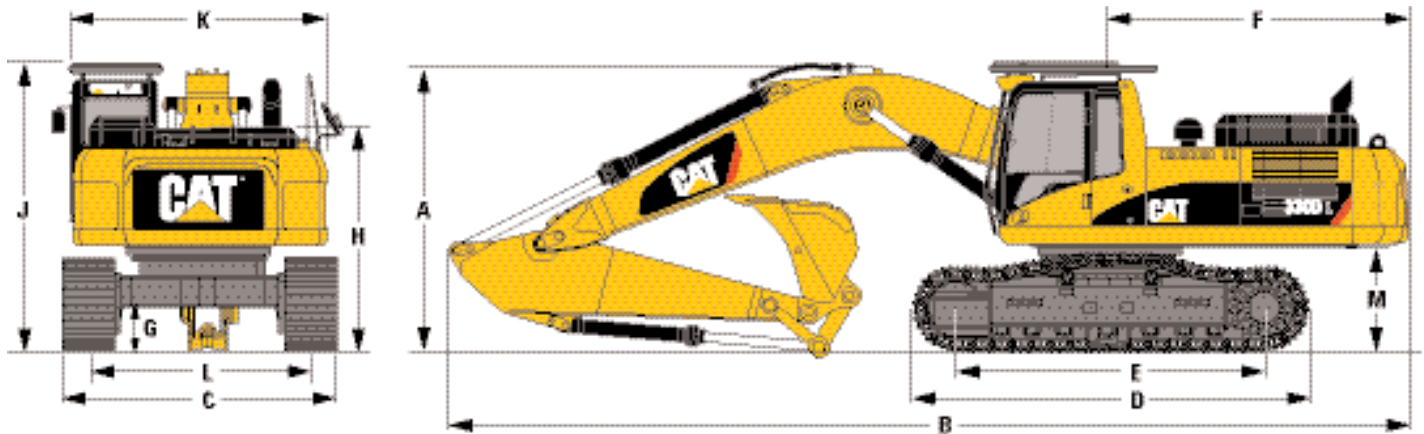
Actual weights and ground pressures will depend on final machine configuration.

		Reach boom 6500 mm				ME boom 6180 mm		VA boom 6520 mm			
		R2.1TB	R2.8DB	R3.2DB	R3.9DB	M2.1TB	M2.5TB	R2.1TB	R2.8DB	R3.2DB	R3.9DB
Stick type											
Stick length	mm	2150	2800	3200	3900	2150	2550	2150	2800	3200	3900
Bucket weight	kg	1627	1318	1318	1112	1772	1772	1772	1627	1627	1627
Bucket capacity	m ³	1.9	1.6	1.6	1.1	1.9	1.9	1.9	1.8	1.8	1.8
Bucket width/type	mm	1500/X	1350/X	1350/X	1000/X	1500/R	1500/R	1500/R	1500/X	1500/X	1500/X
Operating weight*											
330D L (700 mm shoes)	kg	36 310	35 740	35 820	35 760	36 480	36 550	37 460	36 890	36 960	37 110
330D LN (600 mm shoes)	kg	35 860	35 290	35 370	35 310	36 030	36 100	37 000	36 440	36 510	36 660
Ground pressure											
330D L (700 mm shoes)	bar	0.59	0.58	0.58	0.58	0.59	0.59	0.61	0.6	0.6	0.6
330D LN (600 mm shoes)	bar	0.68	0.67	0.67	0.67	0.68	0.68	0.7	0.69	0.69	0.7
Stick weight (without bucket cylinder)	kg	1140	1104	1184	1320	1140	1216	1140	1104	1184	1320
Boom weight (without stick cylinder)	kg	2780				2800		3950			
Upperstructure (without counterweight)	kg	8710				8710		8710			
Undercarriage											
330D L (700 mm shoes)	kg	13 215				13 215		13 215			
330D LN (600 mm shoes)	kg	12 765				12 765		12 765			
Counterweight	kg	6260				6260		6260			

* With counterweight, quick coupler, bucket, operator and full fuel.

Dimensions

All dimensions are approximate.



	mm		mm		mm
A Shipping height (with bucket)		B Shipping length		C Track width	
Reach boom		Reach boom		330D L (700 mm shoes)	3290
2150 mm stick	3560	2150 mm stick	11 450	330D LN (600 mm shoes)	2990
2800 mm stick	3540	2800 mm stick	11 210	D Track length	5020
3200 mm stick	3340	3200 mm stick	11 150	E Length to centers of rollers	4040
3900 mm stick	3670	3900 mm stick	11 200	F Tail swing radius	3500
Mass Excavation boom		Mass Excavation boom		G Ground clearance	450
2150 mm stick	3590	2150 mm stick	11 140	H Body height	2740
2550 mm stick	3560	2550 mm stick	10 900	J Cab height	3280
VA boom		VA boom		K Body width	2960
2150 mm stick	3550	2150 mm stick	11 500	L Track gauge	
2800 mm stick	3630	2800 mm stick	11 230	330D L	2590
3200 mm stick	3560	3200 mm stick	11 215	330D LN	2390
3900 mm stick	3750	3900 mm stick	11 200	M Counterweight clearance	1220

Track Width

Standard Undercarriage with triple grouser shoes	
Long (L)	700 mm
Long Narrow (LN)	600 mm
Optional Undercarriage with triple grouser shoes	
Long (L)	600 mm, 850 mm
	600 mm HD, 750 mm HD
Long Narrow (LN)	600 mm HD

Drive

Maximum Travel Speed	5.0 km/h
Maximum Drawbar Pull	300 kN

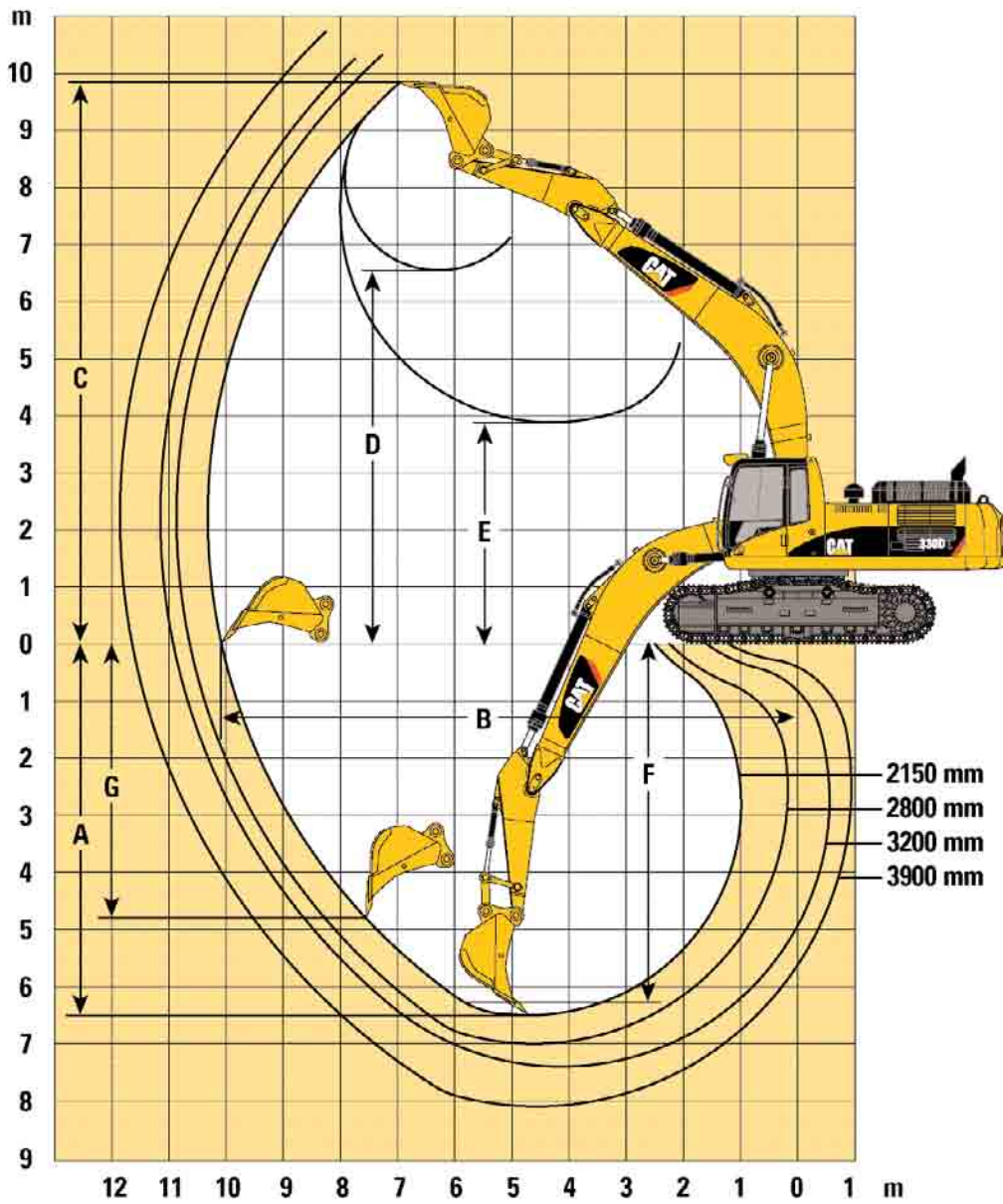
Swing Mechanism

Swing Speed	10 rpm
Swing Torque	108.6 kNm

Service Refill Capacities

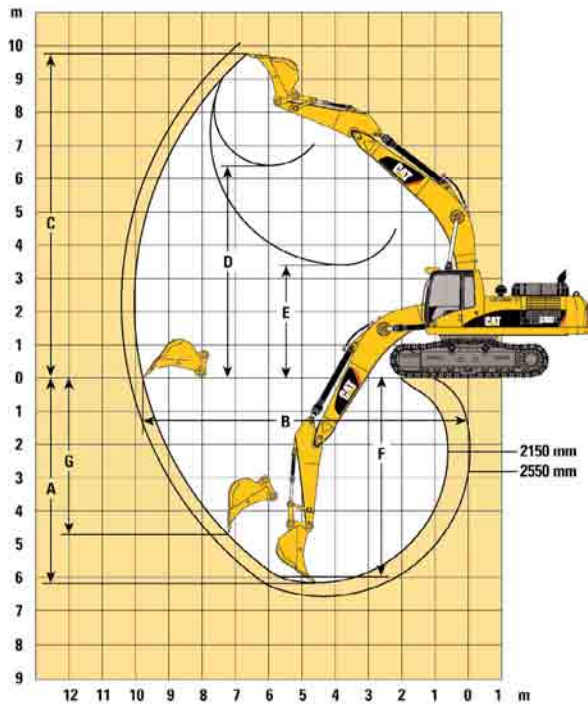
	Liters
Fuel Tank	620
Cooling System	40
Engine Oil	40
Swing Drive (each)	19
Final Drive (each)	8
Hydraulic system (including tank)	410
Hydraulic tank	310

Working Ranges – Reach Boom (6500 mm)



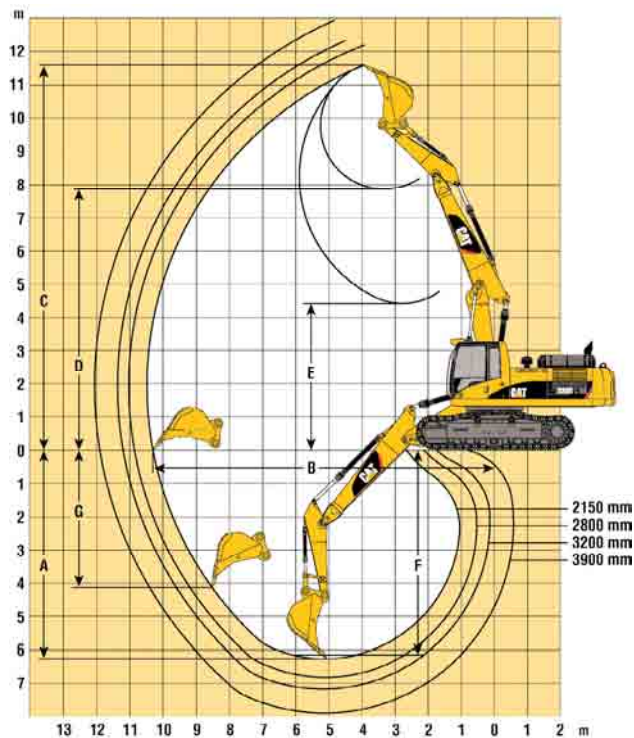
		R2.1TB	R2.8DB	R3.2DB	R3.9DB
Stick Length	mm	2150	2800	3200	3900
A Maximum Digging Depth	mm	-6500	-6990	-7390	-8090
B Maximum Reach at Ground Level	mm	10 070	10 620	10 920	11 640
C Maximum Cutting Height	mm	9820	10 300	10 240	10 710
D Maximum Loading Height	mm	6530	7200	7200	7640
E Minimum Loading Height	mm	3590	3110	2710	2010
F Maximum Digging Depth 2500 mm Level Bottom	mm	-6280	-6820	-7230	-7960
G Maximum Vertical Wall Digging Depth	mm	-4650	-4470	-4450	-6700
Bucket Tip Radius	mm	1897	1761	1761	1761
Bucket Forces (ISO 6015)	kN	249	204	194	184
Stick Forces (ISO 6015)	kN	235	194	177	158

Working Range – Mass Excavation Boom (6180 mm)



		M2.1TB	M2.5TB
Stick Length	mm	2150	2550
A Maximum Digging Depth	mm	-6170	-6570
B Maximum Reach at Ground Level	mm	9760	10 180
C Maximum Cutting Height	mm	9740	10 070
D Maximum Loading Height	mm	6410	6690
E Minimum Loading Height	mm	3400	3000
F Maximum Digging Depth 2500 mm Level Bottom	mm	-5970	-6400
G Maximum Vertical Wall Digging Depth	mm	-4310	-4370
Bucket Tip Radius	mm	1897	1897
Bucket Forces (ISO 6015)	kN	249	233
Stick Forces (ISO 6015)	kN	235	208

Working Ranges – Variable Adjustable Boom (6520 mm)



		R2.1TB	R2.8DB	R3.2DB	R3.9DB
Stick Length	mm	2150	2800	3200	3900
A Maximum Digging Depth	mm	-6263	-6818	-7177	-7892
B Maximum Reach at Ground Level	mm	10 222	10 799	11 113	11 834
C Maximum Cutting Height	mm	11 594	12 187	12 323	12 946
D Maximum Loading Height	mm	7898	8684	8843	9450
E Minimum Loading Height	mm	4424	3932	3449	2783
F Maximum Digging Depth 2500 mm Level Bottom	mm	-6160	-6723	-7085	-7806
G Maximum Vertical Wall Digging Depth	mm	-4135	-4567	-4939	-5589
Bucket Tip Radius	mm	1897	1761	1761	1761
Bucket Forces (ISO 6015)	kN	252	206	197	187
Stick Forces (ISO 6015)	kN	237	197	180	161

Standard Equipment

Standard equipment may vary. Consult your Caterpillar dealer for specifics.

Electrical

- Alternator – 80 amp
- Heavy duty maintenance free batteries (2)
- Lights working
 - Boom, both side
 - Cab interior
 - Cab mounted, two
 - Frame mounted
- Signal/warning horn

Engine

- Automatic engine speed control
- Caterpillar C9 engine (200 kW)
 - Altitude capability to 2300 m
- Fine swing control
- Fuel filter
- High ambient cooling
- Secondary engine shut-off switch
- Side-by-side cooling system with separately mounted AC condenser
- Water separator, with level indicator, for fuel line

Guards

- 6 mm swivel guard on undercarriage
- Heavy duty bottom guards on upper frame
- Heavy duty travel motor guards on undercarriage

Operator Station

- Adjustable armrest
- Air conditioner, heater and defroster with automatic climate control
- Ashtray and 24 volt lighter
- Beverage/cup holder
- Bolt-on FOGS capability
- Capability to install 2 additional pedals
- Coat hook
- Electrical provision for seat heater
- EU sound criteria package
- Floor mat, washable
- Instrument panel and gauges with full color graphical display, start-up level checks
- Laminated front windshield
- Literature compartment
- Mirrors – left and right
- Neutral lever (lock out) for all controls
- Positive filtered ventilation, pressurized cab
- Rear window, emergency exit
- Retractable seat belt
- Sliding upper door window
- Stationary skylight (polycarbonate)
- Storage compartment suitable for a lunch box
- Sunshade for windshield and skylight
- Travel control pedals with removable hand levers
- Windshield wiper and washer (upper and lower)

Undercarriage

- Automatic swing parking brake
- Automatic travel parking brakes
- Grease lubricated track
- Hydraulic track adjusters
- Idler and center section track guards
- Long (L)
- Long Narrow (LN)
- Steps – four
- Triple grouser shoes
 - 330D L – 700 mm
 - 330D LN – 600 mm
- Two speed travel

Other Standard Equipment

- Auxiliary hydraulic valve for hydro-mechanical tools
- Cat branded XT hoses and reusable couplings
- Cat Datalink and capability to use ET
- Caterpillar one key security system with locks for doors, cab and fuel cap
- Cross-roller type swing bearing
- Counterweight with lifting eyes
- Drive for auxiliary pump
- Heavy lift mode
- Regeneration circuit for boom and stick
- S•O•SSM quick sampling valves for engine oil, hydraulic oil and coolant
- Steel firewall between engine and hydraulic pump compartment
- Wiring provisions for Product Link

Optional Equipment

Optional equipment may vary. Consult your Caterpillar dealer for specifics.

Front Linkage

Bucket linkages

DB-family for DB sticks
with lifting eye)

TB-family for TB sticks
with lifting eye)

Buckets and quick coupler
(see pg.11-12)

Booms (with two working lights)

Reach

– 6500 mm

Mass excavation

– 6180 mm

VA

– 6520 mm

Sticks

For reach boom

– R2.1TB1 (2150 mm)

– R2.8DB (2800 mm)

– R3.2DB (3200 mm)

– R3.9DB (3900 mm)

For mass boom

– M2.1TB1 (2150 mm)

– M2.5TB1 (2550 mm)

For VA boom

– R2.1TB1 (2150 mm)

– R2.8DB (2800 mm)

– R3.2DB (3200 mm)

– R3.9DB (3900 mm)

Tips

Shoes

Triple grouser

330D L

600 mm, 850 mm

Heavy duty – 600 mm, 750 mm

330D LN

Heavy duty – 600 mm

Undercarriage

Heavy Duty High Wide

(track length 5020 mm,
gauge 2920 mm and
ground clearance 720 mm)

Extreme Service

(track length 5360 mm,
gauge retracted 2390 mm,
gauge extended 1890 mm,
ground clearance 710 mm)

Guards

FOGS, bolt-on

Full length for L and LN undercarriage
(two piece)

Track end guide for L and LN
undercarriage

Heavy-duty swivel protection (16 mm)

Operator Compartment

Joysticks

Four button joystick or single action
auxiliary control

Thumb wheel modulation joystick

Lunch box storage with lid

Machine security system with
programmable keys

Radio

AM/FM radio mounted in right hand
console with antenna and speakers

Radio ready mounting at rear location
including 24V to 12V converter

Seat

Adjustable high-back seat with
mechanical suspension

Adjustable high-back seat with
air suspension

Adjustable high-back heated seat with
air suspension

Straight travel pedal

Visor rain protection

Windshield

1-piece standard duty

1-piece high impact resistant

50-50 split, sliding

70-30 split, sliding

Auxiliary Controls and Lines

Auxiliary boom lines (high pressure
for reach and mass booms

Auxiliary stick lines (high pressure
for reach and mass booms

Basic control arrangements:

– Single action
(single action tool such as hammer,
with direct return to tank)

– System, combined
(single and double action tools,
direct return to tank)

– System, Medium Pressure AHC
(two directional flow attachment)

– System, Double Medium
Pressure (two function medium
pressure, two directional flow
attachment)

– Circuit, Cooling (circulating
circuit for cooling hydraulic oil)

Universal control group for
quick coupler

Miscellaneous Options

Auto-cleaning attachment

Bio hydraulic oil package

Boom lowering control device with
SmartBoom

Cab front rain protector

Converters, 7 amp-12V

– One

– Two

Electric refueling pump with auto
shut-off

Fine filtration filter

Jump start terminals

Starting aid for cold weather with ether

Stick lowering control device

Travel alarm with cut off switch

330D L and 330D LN Hydraulic Excavators

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

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

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