312D/312D L

Hydraulic Excavators

Engine	
Engine Model	Cat® C4.2 ACERT™
Net Power (SAE J1349)	67 kW
Gross Power	72 kW

Weights	
Operating Weight – Standard Undercarriage	13 120 kg
Operating Weight – Long Undercarriage	13 650 kg

Features

Low Emissions Engine
The Cat® C4.2 engine with ACERT™ Technology optimizes performance and provides low exhaust emissions with better fuel efficiency and reduced wear.

Efficient Hydraulic System
The hydraulic system delivers increased digging force, lifting capacity and drawbar pull.

Comfortable Operator Station
Spacious and quiet, this world-class ROPS cab lets the operator focus on performance and production.

Proven Reliability
Caterpillar design and manufacturing techniques provide maximum uptime with outstanding durability and service life.

Maximum Versatility
Easily configure a large variety of work tools with the Cat® Tool Control System.

Contents

Achieve high productivity and lower operating costs with the Cat® 312D Hydraulic Excavator. Unmatched versatility, improved controllability, easy operation and a comfortable, redesigned operator station help make the 312D an industry-leading performer.

Engine

Clean, quiet operation and superior power with ACERT™ Technology.

Performance

The Cat® C4.2 engine with ACERT™ Technology offers more engine power and runs at lower speeds for better fuel efficiency and reduced wear.

Automatic Engine Control and Fuel Delivery

A three-stage control with one-touch command maximizes fuel efficiency and reduces sound levels. Fuel delivery is managed by the ADEM™ A4 engine controller for the best performance per liter of fuel used. Flexible fuel mapping allows the engine to respond quickly to varying application needs. Electronic controls govern the fuel injection system. Multiple injection fuel delivery involves a high level of precision. By precisely shaping the combustion cycle, combustion chamber temperatures are lower so fewer emissions are generated and fuel combustion is optimized – meaning more work output for your fuel cost.

Crankshaft and Pistons

A forged, one-piece, induction-hardened crankshaft enhances balance, decreases vibration and improves abrasion resistance. Heat resistant, aluminum alloy pistons have short compression height for greater efficiency and longer life.

Economy Mode

Economy mode helps balance the demands of performance and fuel economy while maintaining breakout forces and lift capacity enjoyed at standard power.

On Demand Power Supply (ODPS)

ODPS constantly regulates engine power supply based on the power demanded by the hydraulic system. Fuel consumption and machine noise is reduced in light duty applications.

Electronic Control Module (ECM)

Working as the brain of the engine's control system, ECM responds quickly to operating variables to maximize engine efficiency. Fully integrated with sensors in the engine's fuel, air, coolant and exhaust systems, the ECM stores and relays information on conditions such as rpm, fuel consumption and diagnostics.

Air Cleaner

The radial seal air filter features a double layered filter core for more efficient filtration. A warning is displayed on the monitor when dust accumulates above a preset level.

Hydraulics

High efficiency and performance with low effort and precise control.

Outstanding Performance

With 35 kPa hydraulic pressure for additional lift, swing torque and breakout forces, the 312D hydraulic system is designed for high efficiency and performance. Auxiliary hydraulic and electrical lines are routed to the boom foot, making hydraulic circuit installation easy. Shorter tubes and lines reduce friction and pressure drops for a more efficient use of power.

- Flow is reduced to a minimum when controls are in neutral to reduce fuel consumption and extend component life.
- Electronic Under Speed Control electronically adjusts pump output to not exceed engine power, preventing the need to reserve engine power to avoid engine stalls.
- Hydraulic Cross-Sensing System uses two hydraulic pumps to 100 percent of engine power under all operating conditions to improve productivity with faster implement speeds and quicker, stronger pivot turns.

Pilot System

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

Boom and Stick Regeneration Circuit

The boom and stick regeneration circuit saves energy during boom-down and stick-in operation to increase efficiency and lower operating costs.

Electronic Control System

Ten settings for hydraulic pump flow and pressure can be preset, eliminating the need to adjust the hydraulics each time a tool is changed. Ex factory Cat® Work Tools matching the machine size class are standard preset.

Auxiliary Valve

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

Hydraulic Cylinder Snubbers

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

Electronic Control Systems

Engine and hydraulics management for maximum performance and safety.

Monitor Display Screen

The full-color Liquid Crystal Display (LCD) monitor provides machine information. The master caution lamp blinks ON and OFF when one of the following critical conditions occurs: engine oil pressure low, coolant temperature high or hydraulic oil temperature high. Under normal conditions or the default condition, the monitor display screen is divided into four display areas for clock and throttle dial, gauge, event display and multi-information. The gauge area displays fuel level, hydraulic oil temperature and coolant temperature.

Auxiliary Hydraulic Options

Work tool functionality has increased the versatility of the machine with the enhancements of the following:

- A combined system enables one or two pump flow in one or two directions. With this system only one hydraulic circuit is required.
- The tool control system stores up to 10 different tool settings through the in-cab display monitor. Cat Work Tools are selectable with preset flows and pressures.

Product Link

Using satellite technology, Product Link assists with fleet management by tracking hours, location and product health to Cat customers and dealers.

Operator Station

New levels of comfort, visibility and operation.

The spacious, quiet and comfortable operator station assures high productivity during a long work day.

- Switches, dials and controls are conveniently located within easy reach of the operator.
- The monitor is easy to see and helps maximize visibility.
- The standard air suspension seats adjust to suit the operator's size and weight.
- The pressurized cab provides positive filtered ventilation and fresh or recirculated air can be selected.
- Visibility is maximized with the elimination of window frames for all glass except the rear window. A large, polycarbonate skylight offers excellent upward visibility.

Hydraulic Activation Control Lever

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

Controls

The 312D uses pilot operated control levers positioned so the operator can operate with arms on the armrests. The vertical stroke is longer than the horizontal to reduce operator fatigue.

Joysticks with integrated buttons and sliding switches control all implement and swing functions. The sliding switches modulate control for hydro-mechanical tools and help increase operator comfort and reduce fatigue.

Prestart Check and Monitor Display

Prior to starting the machine, the system checks for low engine oil, hydraulic oil and engine coolant fluid levels and will warn the operator through a color Liquid Crystal Display (LCD) monitor. The LCD monitor displays vital operating and performance information in 27 different languages for operator convenience.

Cab Exterior – Roll Over Protective Structure (ROPS)

The 312D ROPS cab design allows the Falling Object Guard System (FOGS) to be bolted directly to the cab, at the factory or as an attachment. This enables the machine to meet specifications and job site requirements. A ROPS cab is standard and provides 10 percent more glass area than the previous non-ROPS cab. The cab shell is attached to the frame with viscous rubber cab mounts that dampen vibrations and sound levels to enhance operator comfort. Also standard on the cab are working lights with time delay functionality. They have auto shut-off capability – programmable up to 90 seconds – to support safe egress out of the machine and easy departure from the job site.

Structures

Excellent stability and maneuverability.

Caterpillar uses advanced engineering and software to analyze all structures, creating a durable, reliable machine for the toughest applications. More than 70 percent of the structural welds are robotic and achieve over three times the penetration of manual welds. These structural components and the undercarriage are the backbone of the machine's durability.

Carbody Design

X-shaped, box section carbody provides excellent resistance to torsional bending. Track roller frames are press-formed, pentagonal units that deliver exceptional strength and service life. Integral to the track roller frame are the standard idler and center guards, which help maintain track alignment when traveling or working on slopes.

Travel Motors

Travel motors with automatic speed selection let the 312D automatically shift up and down from high and low speed in a smooth, controlled manner.

Linkage

Reliable and versatile.

Built for performance and long service life, Cat® booms and sticks are welded, box-section structures with thick multi-plate, high strength steel fabrications.

Versatility

Combinable hydraulic and tool solutions for any job.

Work Tools

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

Quick Couplers

Cat® Center-Lock™ Pin Grabber Couplers allow work tools to be changed quickly, improving production and increasing machine versatility. This coupler will engage and disengage any Cat Bucket or Work Tool equipped with pins. The Center-Lock Pin Grabber Coupler gives operators confidence through its locking system and visible locking mechanism. At the heart of the center-lock is over-center locking technology. This technology uses proven principles of physics to keep the coupler locked tight.

Buckets

Cat offers a wide range of specialized buckets to meet your needs. The Cat® K Series™ Tooth System provides more wear material, longer tip and adapter life, a one-piece vertical drive retainer, reliable tip retention along with easy installation and removal to improve performance and penetration.

Shears

Shears provide superior and effective scrap processing and are highly productive in demolition environments.

Hammers

Hammers deliver very high blow rates, increasing productivity in demolition and construction applications.

Vibratory Plate Compactors

Vibratory plate compactors integrate perfectly with the Cat Hammer line – brackets and hydraulic kits are fully interchangeable between the two.

Orange Peel Grapples

Constructed of high-strength, wear-resistant steel with a low and compact design, the orange peel grapples are ideal for dump clearance. There are several choices of tines and shells.

Multi-Grapples

Unlimited left and right rotation makes the multi-grapple 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 into more tons per hour.

Multi-Processors

With 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.

Environment

Building a better world while preserving the environment.

Emissions

The Cat® C4.2 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 Caterpillar expertise in three core engine systems: fuel, air and electronics.

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.

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.

- Hydraulic oil service interval can be extended to 4,000 hours with the S·O·S℠ program.
- In addition to the S·O·S program, fine filtration system attachment extends the service interval to 5,000 hours.
- Cat Extended Life Coolant extends service to 12,000 hour, less need for fluid disposal.
- The hydraulic system is compatible with Cat HEES™ hydraulic bio-oil for ecologically sensitive applications.

Serviceability

Simplified service and maintenance saves time and money.

Extended Service Intervals

312D service and maintenance intervals have been extended to reduce machine service time and increase machine availability.

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 312D were 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

The 312D is equipped with S·O·S^{SM} sampling ports and hydraulic test ports for the hydraulic system, engine oil and coolant. A test connection for the Cat Electronic Technician (Cat ET) service tool is located behind the cab.

Anti-Skid Plate

Anti-skid plate covers the top of the 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.

Grease Points

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

Radiator Compartment

The left rear service door allows easy access to the engine radiator, oil cooler and air-to-air aftercooler. Reserve tank and drain cock are attached to the radiator for simplified maintenance.

Customer Support

Unmatched support makes the difference.

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 the 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 that best meets specific needs. These plans can cover the entire machine, including attachments, to help protect your investment.

Operation

Improving operating techniques can boost your profits. Your Cat dealer has videos, 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 counters. 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.

312D/312D L Hydraulic Excavator Specifications

Engine

Engine Model	Cat® C4.2 ACERT™
Gross Power	72 kW
Net Power	67 kW
SAE J1349	67 kW
Bore	102 mm
Stroke	130 mm
Displacement	4.25 L

- Net power advertise is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler and alternator.
- No engine derating required below 2300 m altitude.
- The 312D meets U.S. EPA Tier 3 and EU Stage IIIA Directive/97/68/EC emissions requirements.

Weights

Operating Weight – Standard Undercarriage	13 120 kg
Operating Weight – Long Undercarriage	13 650 kg

- Standard undercarriage: 500 mm shoe, 3.0 m stick, 0.52 m^3 bucket.
- Long undercarriage: 600 mm shoe, 3.0 m stick, 0.52 m^3 bucket.

Swing Mechanism

Swing Torque	30 950 N·m
Swing Speed	12.4 rpm

Drive

Maximum Drawbar Pull	114 kN
Travel Speed	5.5 km/h

Hydraulic System

Main Implement System – Maximum Flow (2x)	127 L/min
Maximum Pressure – Implements	30 500 kPa
Maximum Pressure – Travel	35 000 kPa
Maximum Pressure – Swing	23 000 kPa
Pilot System – Maximum Flow	36 L/min
Pilot System – Maximum Pressure	4120 kPa
Boom Cylinder – Bore	110 mm
Boom Cylinder – Stroke	1015 mm
Stick Cylinder – Bore	120 mm
Stick Cylinder – Stroke	1197 mm
Bucket Cylinder – Bore	100 mm
Bucket Cylinder – Stroke	939 mm

Service Refill Capacities

Fuel Tank	250 L
Cooling System	17.9 L
Engine Oil	19.5 L
Swing Drive	3 L
Final Drive (Each)	3 L
Hydraulic System (Including Tank)	162 L
Hydraulic Tank	150 L

Standards

Cab/ROPS	ISO 12117-2:2008
Cab/FOGS	SAE J1356 FEB88 ISO 10262

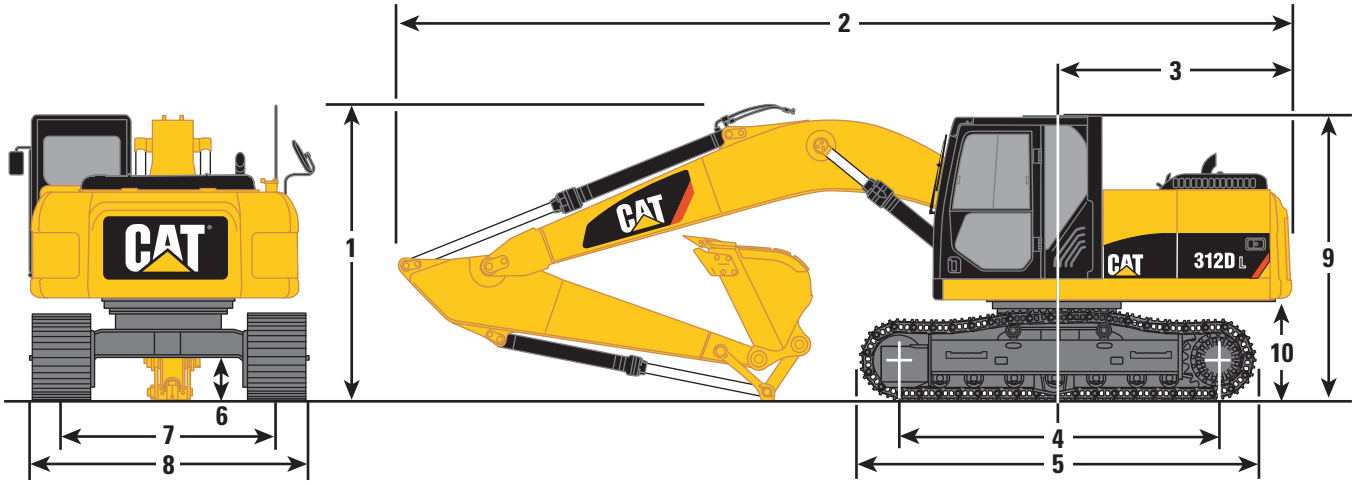
Sound Performance

Performance:

- The operator sound exposure Leq (equivalent sound pressure level) measured according to the work cycle procedures specified in ANSI/SAE J1166 OCT 98 is 73 dB(A), at standard ambient, for the 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.

Dimensions

All dimensions are approximate.



	Boom Options	Reach	Reach	Reach
	Stick Options	**2.5 m**	**2.8 m**	**3.0 m**
1	Shipping Height	2830 mm	2970 mm	2830 mm
2	Shipping Length	7610 mm	7590 mm	7610 mm
3	Tail Swing Radius	2140 mm	2140 mm	2140 mm
4	Length to Center of Rollers			
	312D	2780 mm	2780 mm	2780 mm
	312D L	3040 mm	3040 mm	3040 mm
5	Track Length			
	312D	3490 mm	3490 mm	3490 mm
	312D L	3750 mm	3750 mm	3750 mm
6	Ground Clearance	430 mm	430 mm	430 mm
7	Track Gauge			
	312D	1990 mm	1990 mm	1990 mm
	312D L	1990 mm	1990 mm	1990 mm
8	Transport Width	500 mm Shoes	600 mm Shoes	700 mm Shoes
	312D	2490 mm	2590 mm	2690 mm
	312D L	2490 mm	2590 mm	2690 mm
9	Cab Height	2760 mm	2760 mm	2760 mm
10	Counterweight Clearance	915 mm	915 mm	915 mm

312D/312D L Hydraulic Excavator Specifications

Operating Weights

Caterpillar designed and built track-type undercarriage.

Track Width			Operating Weight 2.5 m	Operating Weight 2.8 m	Operating Weight 3.0 m
312D	500 mm triple grouser		13 060 kg	13 100 kg	13 120 kg
	600 mm triple grouser		13 290 kg	13 330 kg	13 350 kg
	700 mm triple grouser		13 540 kg	13 580 kg	13 610 kg
	770 mm triple grouser		13 680 kg	13 720 kg	13 740 kg
		Blade: add			
	500 mm triple grouser	w/Blade	13 850 kg	13 890 kg	13 920 kg
	600 mm triple grouser	w/Blade	17 090 kg	14 130 kg	14 150 kg
	700 mm triple grouser	w/Blade	14 350 kg	14 390 kg	14 420 kg
	770 mm triple grouser	w/Blade	14 490 kg	14 530 kg	14 550 kg
312D L	500 mm triple grouser		13 610 kg	13 380 kg	13 400 kg
	600 mm triple grouser		13 590 kg	13 630 kg	13 650 kg
	700 mm triple grouser		13 860 kg	13 900 kg	13 920 kg
	770 mm triple grouser		14 000 kg	14 040 kg	14 070 kg
		Blade: add			
	500 mm triple grouser	w/Blade	14 130 kg	14 170 kg	14 200 kg
	600 mm triple grouser	w/Blade	14 380 kg	14 420 kg	14 450 kg
	700 mm triple grouser	w/Blade	14 670 kg	14 710 kg	14 730 kg
	770 mm triple grouser	w/Blade	14 810 kg	14 850 kg	14 880 kg

Buckets

Buckets have tapered sides, angled corner teeth, dual radius curvature, horizontal wear strips and holes for optional side cutters.

Material Densities

Material	kg/m³*	Material	kg/m³*
Clay, dry	1480	Gravel, pit run	1930
Clay, wet	1660	Rock/dirt, 50%	1720
Earth, dry	1510	Sand, dry	1420
Earth, wet	1600	Sand, wet	1840
Loam	1250	Sand and Clay	1600
Gravel, dry	1510	Stone, crushed	1600
Gravel, wet	2020	Top soil	950

* kilograms per loose cubic meter
For densities of other materials see Caterpillar Performance Handbook.

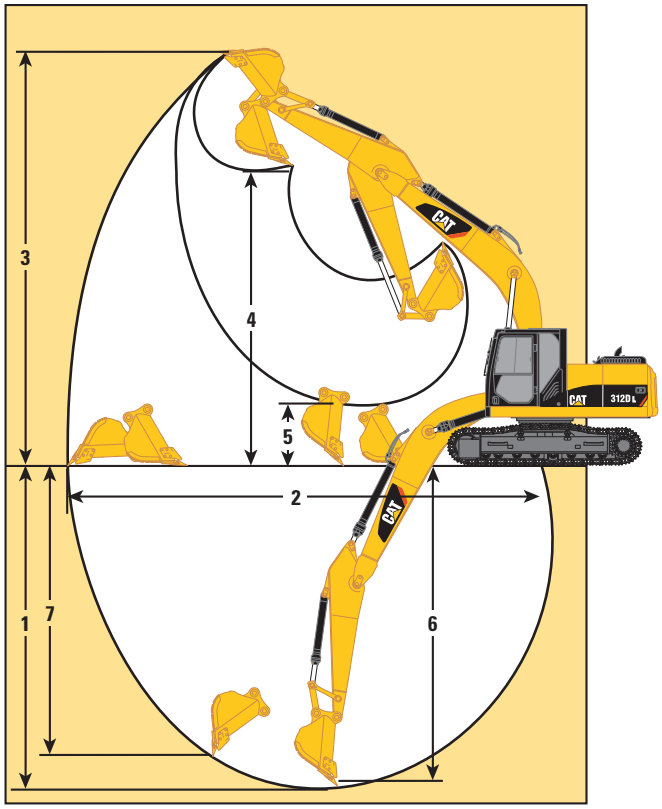
Undercarriage

Caterpillar designed and built track-type undercarriage.

Track Width	Ground Pressure	
	312D	312D L
500 mm triple grouser	41.8 kPa	39.4 kPa
600 mm triple grouser	35.5 kPa	33.4 kPa
700 mm triple grouser	31.0 kPa	29.2 kPa
770 mm triple grouser	28.5 kPa	26.9 kPa

Working Ranges

All dimensions are approximate.



	Boom	Reach 5.68 m	Reach 5.68 m	Reach 5.68 m
	Stick	**2.5 m***	**2.8 m***	**3.0 m***
	Bucket	**0.52 m^3**	**0.52 m^3**	**0.52 m^3**
1	Maximum Digging Depth	5540 mm	5840 mm	6040 mm
2	Maximum Reach at Ground Level	8170 mm	8430 mm	8620 mm
3	Maximum Cutting Height	8480 mm	8580 mm	8700 mm
4	Maximum Loading Height	6100 mm	6210 mm	6340 mm
5	Minimum Loading Height	2020 mm	1730 mm	1530 mm
6	Maximum Depth Cut for 2440 mm Level Bottom	5330 mm	5640 mm	5850 mm
7	Maximum Vertical Wall Digging Depth	4980 mm	5160 mm	5360 mm
	Stick Digging Force (SAE)	66 kN	62 kN	59 kN
	Bucket Digging Force (SAE)	96 kN	96 kN	96 kN

* Measurements shown are for machines equipped with a 0.52 m^3 bucket.

Work Tools Matching Guide

When choosing between various work tool models that can be installed onto the same machine configuration, consider work tool application, productivity requirements, and durability. Refer to work tool specifications for application recommendations and productivity information.

Without quick coupler			312D			312D L		
		mm	2100	2500	3000	2100	2500	3000
Hammers		H90C						
		H100C						
		H115 S						
Hydraulic Shear (boom mounted)		S320						
Multi-Grapples		G310B-D						
		G310B-R						
Vibratory Plate Compactor		CVP75						
Orange Peel Grapples	5 tines	GSH9B-300						
	4 tines	GSH9B-300						
	5 tines	GSH9B-400						
	4 tines	GSH9B-400						
	5 tines	GSH15B-400		×	×			
	4 tines	GSH15B-400			×			
	5 tines	GSH15B-500	×	×	×			
	4 tines	GSH15B-500		×	×			
	5 tines	GSH15B-600	×	×	×			×
	4 tines	GSH15B-600	×	×	×			
	5 tines	GSH15B-800	×	×	×		×	×
	4 tines	GSH15B-800	×	×	×			×
Rehandling Clamshell Buckets		GOS20-220						
		GOS20-260						
		GOS20-300						
		GOS20-400						
		GOS20-560						
		GOS20-680						
		GOS20-730						
		GOS25-460						
		GOS25-520						
		GOS25-580						
		GOS25-750			×			
		GOS25-900	×	×	×			
		GOS25-990	×	×	×			
		GOS25-1140	×	×	×			×
With quick coupler								
Quick Coupler		CW-20						
		CW-20s						
Hammers		H90C						
		H100C						
		H115 S						
Multi-Grapples		G310B-D		×	×		×	×
		G310B-R		×	×		×	×
Vibratory Plate Compactor		CVP75						

- Maximum Material Density 3000 kg/m³
- Maximum Material Density 1800 kg/m³
- Maximum Material Density 1200 kg/m³
- × Not Compatible
- 360° Working Range
- Over the Front Only
- Available

Reach Boom Lift Capacities

 Load Point Height

 Load at Maximum Reach

 Load Radius Over Front

 Load Radius Over Side

R2.5 STICK – 2.5 m
BUCKET – None

UNDERCARRIAGE – Standard
SHOES – 500 mm triple grouser

BOOM – Reach 4.65 m
BLADE – Up

		1.5 m		3.0 m		4.5 m		6.0 m				
												m
6.0 m	kg					*3350	*3350			*2450	*2450	5.37
4.5 m	kg					*3550	*3550	3300	2550	*2250	*2250	6.37
3.0 m	kg			*5850	*5850	*4350	3800	3250	2500	*2250	2000	6.90
1.5 m	kg			*8400	6400	4800	3600	3100	2400	*2350	1900	7.08
Ground Line	kg			*6900	6100	4600	3400	3050	2300	2500	1900	6.93
–1.5 m	kg	*4900	*4900	8900	6050	4550	3350	3000	2300	2750	2100	6.42
–3.0 m	kg	*8750	*8750	*8050	6150	4550	3400			3450	2600	5.47

* Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories must be deducted from the above lifting capacities. Lifting capacities are based on the machine standing on a firm, uniform supporting surface. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

R2.5 STICK – 2.5 m
BUCKET – None

UNDERCARRIAGE – Standard
SHOES – 500 mm triple grouser

BOOM – Reach 4.65 m
BLADE – Down

		1.5 m		3.0 m		4.5 m		6.0 m				
												m
6.0 m	kg					*3350	*3350			*2450	*2450	5.37
4.5 m	kg					*3550	*3550	*3500	2750	*2250	*2250	6.37
3.0 m	kg			*5850	*5850	*4350	4100	*3750	2700	*2250	2150	6.90
1.5 m	kg			*8400	7050	*5300	3900	*4150	2600	*2350	2050	7.08
Ground Line	kg			*6900	6750	*6000	3700	*4500	2500	*2600	2050	6.93
–1.5 m	kg	*4900	*4900	*9200	6700	*6150	3650	*4450	2450	*3100	2250	6.42
–3.0 m	kg	*8750	*8750	*8050	6800	*5500	3650			*4200	2850	5.47

* Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories must be deducted from the above lifting capacities. Lifting capacities are based on the machine standing on a firm, uniform supporting surface. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

312D/312D L Hydraulic Excavator Specifications

Reach Boom Lift Capacities

 Load Point Height

 Load at Maximum Reach

 Load Radius Over Front

 Load Radius Over Side

R2.5 STICK – 2.5 m
BUCKET – None

UNDERCARRIAGE – Long
SHOES – 500 mm triple grouser

BOOM – Reach 4.65 m
BLADE – Up

		1.5 m		3.0 m		4.5 m		6.0 m				
												m
6.0 m	kg					*3350	*3350			*2450	*2450	5.37
4.5 m	kg					*3550	*3550	*3500	2600	*2250	*2250	6.37
3.0 m	kg			*5850	*5850	*4350	3900	3700	2550	*2250	2050	6.90
1.5 m	kg			*8400	6500	*5300	3650	3550	2450	*2350	1900	7.08
Ground Line	kg			*6900	6200	5350	3450	3500	2350	*2600	1950	6.93
–1.5 m	kg	*4900	*4900	*9200	6200	5250	3400	3450	2350	*3100	2150	6.42
–3.0 m	kg	*8750	*8750	*8050	6250	5300	3450			4000	2650	5.47

* Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories must be deducted from the above lifting capacities. Lifting capacities are based on the machine standing on a firm, uniform supporting surface. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

R2.5 STICK – 2.5 m
BUCKET – None

UNDERCARRIAGE – Long
SHOES – 500 mm triple grouser

BOOM – Reach 4.65 m
BLADE – Down

		1.5 m		3.0 m		4.5 m		6.0 m				
												m
6.0 m	kg					*3350	*3350			*2450	*2450	5.37
4.5 m	kg					*3550	*3550	*3500	2800	*2250	*2250	6.37
3.0 m	kg			*5850	*5850	*4350	4200	*3750	2750	*2250	2200	6.90
1.5 m	kg			*8400	7200	*5300	3950	*4150	2650	*2350	2100	7.08
Ground Line	kg			*6900	*6900	*6000	3800	*4500	2550	*2600	2100	6.93
–1.5 m	kg	*4900	*4900	*9200	6850	*6150	3700	*4450	2500	*3100	2300	6.42
–3.0 m	kg	*8750	*8750	*8050	6950	*5500	3750			*4200	2900	5.47

* Indicates that the load is limited by hydraulic lifting capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567:2007. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. Weight of all lifting accessories must be deducted from the above lifting capacities. Lifting capacities are based on the machine standing on a firm, uniform supporting surface. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

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

AUXILIARY CONTROLS AND LINES
- Auxiliary boom lines (high pressure)
- Auxiliary stick lines (high pressure)
- Basic control arrangements:
  - Tool Control
    - Combined function (one-way high pressure circuit for hammer application, function for one or two-way high pressure)
    - Tool selection (10 tools via monitor)
- High pressure control group for center-lock quick coupler
- Cooling circuit for auxiliary hydraulics
- Universal control group for quick coupler
- Hammer return filter circuit

ELECTRICAL
- Alarm, travel
- Alternator, 50 A
- Cat® battery
- Circuit breaker
- Warning horn (front)
- Water level indicator
- Working light, boom (right side)
- Working light, storage box mounted
- Working lights, cab mounted
- Rearview camera

ENGINE
- Cat® C4.2 diesel engine with ACERT™ Technology, Altitude capability to 2300 m
- 52° C cooling capability
- Air inlet heater for low ambient starting
- Automatic engine speed control with push button return to idle
- 24V electric starting
- Cat® Extended Life Coolant
- Radial seal air filters with double element, integrated cyclonic
- Water separator in fuel line
- Secondary engine shut-off switch
- Fuel economy mode
- Fuel filter, 2 micron
- Radiator, waved fin with side-by-side type oil cooler

FRONT LINKAGE
- Boom (with two working lights), Reach 4650 mm
- Boom lowering check valve
- Bucket linkage, B linkage with lifting eye
- Stick, 2500 mm
- Stick lowering check valve

GUARDS
- Guard, bottom
- Guards, track motor
- Guard, swivel

OPERATOR STATION
- Adjustable armrests
- Air conditioner, heater and defroster with automatic climate control
- Ashtray and 24V lighter
- Beverage cup holder
- Bolt-on FOGS capability
- Converters, 7A/12V (2)
- Floor mat, washable
- Instrument panel and gauges with full color graphical display, start-up level checks
- Joysticks (2) thumb wheel
- Laminated front windshield
- Literature compartment
- Lunch box storage with lid
- Mirrors, left and right
- Neutral lever (lock-out) for all controls
- Radial windshield wiper and washer (upper and lower)
- Positive filtered ventilation, pressurized cab
- Rear window, emergency exit
- Retractable seat belt
- ROPS cab
- Seat, adjustable, high back, heated with air suspension
- Sliding upper door window
- Stationary skylight (polycarbonate)
- Storage compartment suitable for a lunch box
- Sunscreen for windshield and skylight
- Travel control pedals with removable hand levers
- Windshield 70-30 split, sliding

SHOES
- Shoes, triple grouser, 500 mm

UNDERCARRIAGE
- Automatic swing parking brake
- Automatic travel parking brakes
- Grease lubricated tracks
- Hydraulic track adjusters
- Idler and center section track guiding guards
- Two-speed travel

OTHER STANDARD EQUIPMENT
- Boom and stick drift reducing valve
- Boom and stick regeneration circuit
- Counterweight, 2450 kg
- Cat® one key security system with locks for doors, cab and fuel cap
- Cat® Data Link and capability for Cat Electronic Technician
- Full-steel firewall between engine and hydraulic pump compartment
- Mirrors (frame right, cab left)
- Precleaner
- Product Link 321
- Reverse swing damping valve
- Separate hydraulic filter with reusable metal tube for filter element – no drop oil filter
- S·O·S℠ quick sampling valves for engine oil, hydraulic oil and coolant

312D/312D L Optional Equipment

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

AccuGrade™ Basic, Laser and GPS ready
Bucket linkage
Cold weather start
Front windshield guard
Hand control pattern changer
Heavy-duty bottom guard
Rain protector
Side steel bumper
Secondary exit, rear window
Stick and boom configurations
- 3.0 m stick
- 2.8 m stick
- 2.5 m stick

Sun shade
Vandalism protection

Notes

Notes

312D/312D L Hydraulic Excavator

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

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