316E

Hydraulic Excavator

Engine		
Engine Model	Cat® C4.4 ACERT™	
Net Power – SAE J1349	85 kW	113 hp
Gross Power – SAE J1995	90 kW	120 hp

Drive		
Maximum Travel Speed	5.2 km/h	3.2 mph
Maximum Drawbar Pull	156 kN	35,115 lbf
Weight		
Operating Weight	17 600 kg	38,801 lb

Introduction

Since its introduction in the 1990s, the 300 Series family of excavators has become the industry standard in general, quarry, and heavy construction applications. The all-new E Series and the 316E will continue that trend-setting standard.

The 316E meets today's U.S. EPA Tier 4 Interim emission standards. It is also built with several new fuel-saving and comfort-enabling features and benefits that will delight owners and operators.

If you are looking for more productivity and comfort less fuel consumption and emissions, and easier and more sensible serviceability, you will find it in the all-new 316E and the E Series family of excavators.

Contents

Engine

Reduced emissions, economical and reliable performance

Cat® C4.4 ACERT™ Engine

The Cat C4.4 ACERT engine delivers the same level of performance using significantly less fuel than the previous series engine.

Emissions Solution

Equipped to meet U.S. EPA Tier 4 Interim emission standards, the 316E's C4.4 ACERT engine features an aftertreatment regeneration solution that ensures the machine works as normal with no operator intervention needed. The regeneration process automatically starts once the filtering system detects soot buildup – with no interruption to machine performance or the work process.

Biodiesel-Ready Fuel System

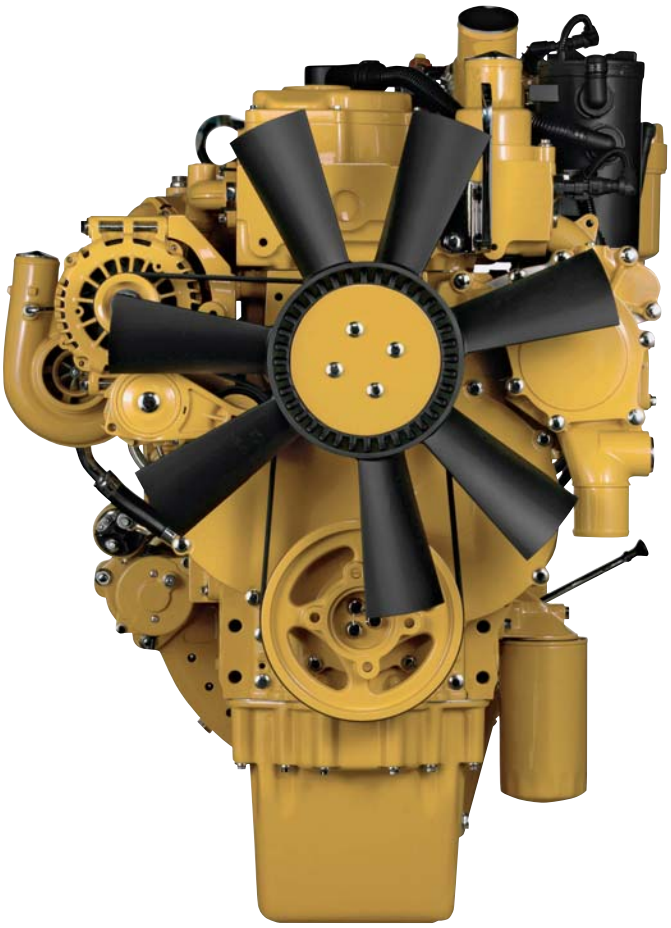
The C4.4 ACERT engine is equipped with an electronic-controlled high-pressure fuel system that includes an electric priming pump and three-layer fuel hoses to allow the use of biodiesel (meeting ASTM 6751 or EN 14214) up to B20 (biodiesel 20% mixture).

Cooling System

The cooling system features an air-to-air aftercooler and A/C condenser that tilt up and swing out of the way for easy servicing.

Speed and Power Control

The 316E features speed control to maximize performance while minimizing fuel consumption. Two different power modes are offered: high power mode when you need maximum production; economy mode when you need performance with the lowest fuel consumption. The operator can easily change between modes through the console switch panel to meet the needs for the job at hand – all to help manage and conserve fuel.



Operator Station

Comfort and convenience to keep people productive

Seats

The seat range includes air suspension, heated, and air cooled options. All seats include a reclining back, upper and lower seat slide adjustments, and height and tilt angle adjustments to meet operator needs for comfort and productivity.

Controls

The right and left joystick consoles can be adjusted to meet individual preferences, improving operator comfort and productivity during the course of a day. With the touch of a button, one-touch idle reduces engine speed to help save fuel; touch it again or move the joystick and the machine returns to normal operating level.

Monitor

The 316E is equipped with a 7" LCD (Liquid Crystal Display) monitor (1) that's 40% bigger than the previous model's with higher resolution for better visibility. In addition to an improved keypad and added functionality, it's programmable to provide information in a choice of 44 languages to support today's diverse workforce.

An "Engine Shutdown Setting" accessible through the monitor allows owners and operators to specify how long the machine should idle before shutting down the engine, which can save significant amounts of fuel.

The image of the rearview camera is displayed directly on the monitor, which will help keep you focused on the job at hand.

Power Supply

Two 12-volt power supply sockets are located near key storage areas for charging electronic devices such as an MP3 player and cell phone.

Storage

Storage spaces are located in the front, rear, and side consoles. A dedicated space near the auxiliary power supply holds MP3 players and cell phones. The drink holder accommodates large mugs with handles, and a shelf behind the seat stores large lunch or toolboxes.

Automatic Climate Control

The climate control system features five air outlets with positive filtered ventilation, which makes working in the heat and cold much more pleasant.

Hydraulics

Power to move more dirt, rock, and debris with speed and precision

Hydraulic Horsepower

Hydraulic horsepower is the actual machine power available to do work through implements and work tools. It's much more than just the engine power under the hood – it's a core strength that differentiates Cat machines from other brands.

Main Control Valve and Auxiliary Valves

The 316E uses a high-pressure system to tackle the toughest of work in short order. The machine features a highly efficient and simple main control valve to improve fuel consumption; it also allows for greater tool versatility.

Electric Boom Regeneration System

The 316E regenerates the flow of oil from the head end of the boom cylinder to the rod end of the boom cylinder during a boom down operation to save energy, which helps improve fuel efficiency. It is optimized for any dial speed setting being used by the operator, which results in less pressure loss for higher controllability, more productivity, and lower operating costs.

Structures & Undercarriage

Built to work in rugged environments

Frame

The upper frame includes reinforced mountings to support the Roll-Over Protective Structure (ROPS) cab; the lower frame is reinforced to increase component durability.

Undercarriage

Long undercarriage supports various work applications. The track rollers are a double solid-pin-type design to improve reliability compared to the single solid-pin-type design. A segmented two-piece guiding guard is now offered to help maintain track alignment and improve performance in multiple applications.

Counterweight

Built with an integrated rearview camera housing, the counterweight comes with integrated links to enable easy removal for maintenance or shipping.

Front Linkage

Made for high stress and long service life

Booms and Sticks

The 316E is offered with a reach boom and three stick configurations: R3.1 m (10'2"), R2.9 m (9'6"), and R2.6 m (8'6"). Also, a new thumb-ready stick with brackets to attach a Cat thumb on the machine is an available option. Each boom and stick is built with internal baffle plates for added durability, and each undergoes ultrasound inspection to ensure weld quality and reliability.

Reach configuration balances digging force and bucket capacity. It covers all applications this size of machine was designed to take on such as digging, loading, trenching, and working with hydraulic tools.

Large box-section structures with thick, multi-plate fabrications, castings, and forgings are used in high-stress areas such as the boom nose, boom foot, boom cylinder, and stick foot to improve durability. Also, the front linkage pins' inner bearing surfaces are welded with a self-lubricated bearing used to extend service intervals and increase uptime.

Work Tools

You can dig, hammer, rip, and cut with confidence.

You can extend the versatility and performance of your machine with the full lineup of Cat work tools. Each tool equips your machine to perform many different tasks found at a variety of job sites.

Couplers: Quick Tool Changes

Imagine the productivity you'll achieve with a quick coupler. Combine a robust coupler with a common work tool inventory that can be shared between same size machines and you'll get performance and flexibility on every job. The Cat Center-Lock™ pin grabber coupler features a patented locking system and highly visible lock. You can clearly see when the coupler is engaged or disengaged from the attachment.

Work Tools: Cut, Crush, Pulverize and Load

No matter your specialty, Caterpillar provides tools that are perfectly matched to get the most out of your Cat machine – quickly and efficiently. Field-installed hydraulic kits are uniquely designed to integrate any Cat work tool with your 316E.

Buckets: Dig, Move, Load

Cat buckets are designed to fill efficiently so you notice a fast, smooth cycle, which means high productivity each time you dig. Wear characteristics of general duty, heavy duty, and severe duty buckets give you solid performance in a wide variety of material abrasions. Ditch cleaning and other specialty buckets are available when needed.

GRAB, SORT, LOAD

Pro Series Hydraulic Thumbs

Stiff Link Thumbs

Contractors' Grapples

Trash Grapples

SWAP TOOLS

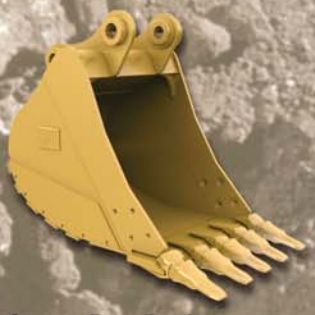
Center-Lock™ Pin Grabber Coupler

DIG & PACK

Ditch Cleaning and Tilt Buckets

General Duty Buckets

Heavy Duty Buckets



Severe Duty Buckets

Vibratory Plate Compactors

CUT, CRUSH, BREAK & RIP

Multi-Processors

Scrap & Demolition Shears

Secondary Pulverizers

Hydraulic Hammers

Rippers

Integrated Technologies

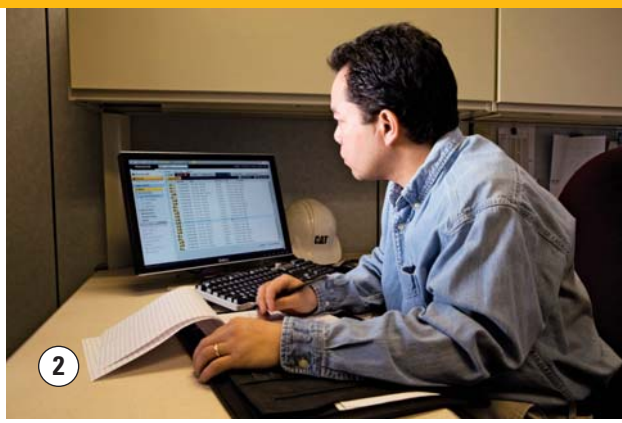
Solutions that make work easier and more efficient

Cat® Grade Control Depth and Slope

This optional system combines traditional machine control and guidance with standard factory-installed and calibrated components, making the system ready to go to work the moment it leaves the factory. The system utilizes internal front linkage sensors – well protected from the harsh working environment – to give operators real-time bucket tip position information through the cab monitor (1), which minimizes the need and cost for traditional grade checking and enhances job site safety. It also helps the operator complete jobs in fewer cycles, which means less fuel use. Cat dealers can upgrade the system to full three-dimensional control by adding proven Cat AccuGrade™ positioning technologies, including GPS and Universal Total Station (UTS).

Cat Product Link

This optional system is deeply integrated into the machine monitoring system (2 and 3) and is designed to help customers improve their overall fleet management effectiveness. Events and diagnostic codes as well as hours, fuel consumption, idle time, machine location, and other detailed information are transmitted to a secure web based application called VisionLink™, which uses powerful tools to communicate to users and dealers.



Serviceability

Fast, easy and safe access built in

Service Doors

Wide service doors (1) feature sturdier hinges and latches and a new screen design to help prevent debris entry; a one-piece hood (2) provides easier access to the engine and cooling compartments.

Compartments

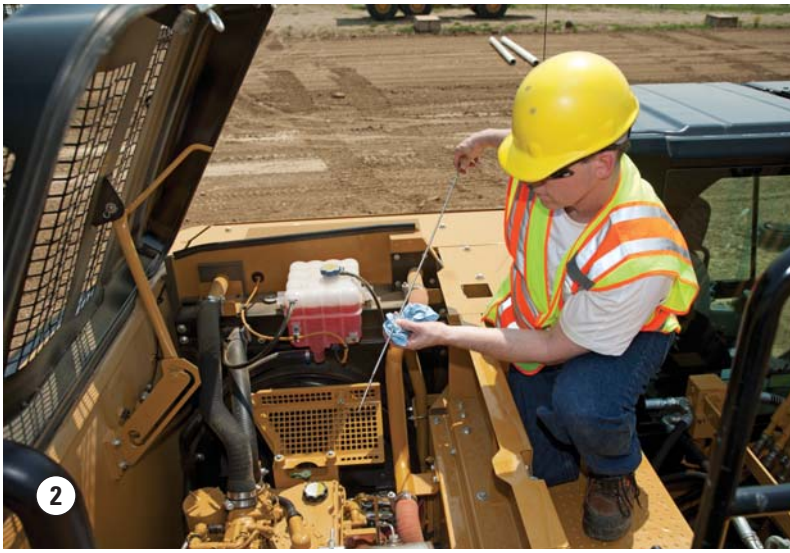
The radiator (3), pump, and air cleaner compartments provide easy access to major components. The fresh air filter is located on the side of the cab to make it easy to reach and replace as needed.

Other Service Benefits

The water separator with water level sensor has a primary fuel filter element located in the pump compartment near ground level; the electric priming pump is mounted before the primary filter base and is easy to service compared to a traditional hand-priming pump.

The fuel tank features a remote drain cock located in the pump compartment to make it easy to remove water and sediment during maintenance.

The engine oil check gauge is situated in front of the engine compartment for easy access, and a uniquely designed drain cock helps prevent spills.



Safety

Features to help protect people

ROPS Cab

The ROPS-certified cab (1) allows an Operator Protective Guard (OPG) to be bolted directly to it.

Sound Proofing

Improved sealing and cab roof lining lower noise levels inside the cab significantly during machine operation.

Anti-Skid Plates

The surface of the upper structure and the top of the storage box area (2) are covered with anti-skid plates to help prevent service personnel and operators from slipping during maintenance.

Steps, Hand and Guard Rails

Steps on the track frame and storage box along with extended hand (3) and guard rails to the upper deck enable operators to securely work on the machine.

Time Delay Lights

When the light switch is on, cab and boom lights will illuminate to enhance visibility after the engine start key has been turned off.

High Intensity Discharge (HID) Lights

Halogen lights are standard, but they can be upgraded to HID for greater visibility.

Windows

The 70/30 split configuration features an upper window equipped with handles on the top and both sides so the operator can slide it to store in the ceiling. The lower window is removable and can be stored on the left wall of the cab shell. The large skylight provides great overhead visibility, excellent natural lighting, and good ventilation. The skylight can be opened completely to become an emergency exit.

Wiper System

A lower wiper is available as an option to maximize visibility in poor weather conditions. The lower wiper motor is integrated to the upper frame so it doesn't obstruct the forward view.

Monitor Warning System

The machine features a buzzer in the monitor that tells customers when critical events like plugged filters or low hydraulic pressure need to be immediately addressed.

Rearview Camera

An optional rearview camera is housed in the counterweight (4). The image projects through the cab monitor to give the operator a clear view of what is behind the machine.

Complete Customer Care

Service you can count on

Product Support

Cat dealers utilize a worldwide parts network to maximize your machines' uptime. Plus they can help you save money with Cat remanufactured components.

Machine Selection

What are the job requirements and machine attachments? What production is needed? Your Cat dealer can provide recommendations to help you make the right machine choices.

Purchase

Consider financing options and day-to-day operating costs. Look at dealer services that can be included in the machine's cost to yield lower owning and operating costs over time.

Customer Support Agreements

Cat dealers offer a variety of customer support agreements and work with you to develop a plan to meet your 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. Caterpillar also offers simulators and certified operator training to help maximize the return on your investment.

Replacement

Repair, rebuild, or replace? Your Cat dealer can help you evaluate the cost involved so you can make the best choice for your business.

Sustainability

Generations ahead in every way

- The C4.4 ACERT engine, along with the Cat Clean Emissions Module (CEM), meets U.S. EPA Tier 4 Interim emission standards.
- Even when operating in high horsepower and high production applications, the 316E performs a similar amount of work while burning up to 8% less fuel than the previous D Series model. This means more efficiency, less resources consumed, and fewer emissions.
- The 316E has the flexibility of running on either ultra-low-sulfur diesel (ULSD) fuel with 15 ppm of sulfur or less or biodiesel (B20) fuel blended with ULSD that meets ASTM 6751 or EN 14214 standards.
- An overfill indicator rises when the fuel tank is full to help service technicians avoid spilling.
- The QuickEvac™ option ensures fast, easy, and secure changing of engine and hydraulic oil.
- The 316E is built to be rebuilt with major structures and components capable of being remanufactured to reduce waste and replacement costs.
- An efficient engine oil filter eliminates the need for painted metal cans and aluminum top plates. The cartridge-style spin-on housing enables the internal filter to be separated and replaced; the used internal element can be incinerated to help reduce waste.
- The 316E is an efficient, productive machine that's designed to conserve our natural resources for generations ahead.

Engine

Engine Model	Cat® C4.4 ACERT™	
Net Power – SAE J1349	85 kW	113 hp
Gross Power – SAE J1995	90 kW	120 hp
Bore	105 mm	4.13 in
Stroke	127 mm	5.00 in
Displacement	4.4 L	269 in^3

Hydraulic System

Main System – Maximum Flow (Total)	300 L/min	79 gal
Swing System – Maximum Flow	150 L/min	40 gal
Maximum Pressure – Equipment	35 000 kPa	5,076 psi
Maximum Pressure – Travel	35 000 kPa	5,076 psi
Maximum Pressure – Swing	22 600 kPa	3,278 psi
Pilot System – Maximum Flow	25.8 L/min	1,574 in^3/min
Pilot System – Maximum Pressure	4120 kPa	598 psi
Boom Cylinder – Bore	110 mm	4 in
Boom Cylinder – Stroke	1193 mm	47 in
Stick Cylinder – Bore	120 mm	5 in
Stick Cylinder – Stroke	1331 mm	52 in
Bucket Cylinder – Bore	110 mm	4 in
Bucket Cylinder – Stroke	1039 mm	41 in

Drive

Maximum Travel Speed	5.2 km/h	3.2 mph
Maximum Drawbar Pull	156.2 kN	35,115 lbf

Swing Mechanism

Swing Speed	9.3 rpm	
Swing Torque	44.7 kN·m	32,969 lb ft

Service Refill Capacities

Fuel Tank Capacity	290 L	76.61 gal
Cooling System	24 L	6.34 gal
Engine Oil (with filter)	13.5 L	3.57 gal
Swing Drive	2.4 L	0.63 gal
Final Drive (each)	5 L	1.32 gal
Hydraulic System (including tank)	190 L	50.19 gal
Hydraulic Tank	106 L	28.00 gal

Track

Number of Shoes (each side)	44 pieces
Number of Track Rollers (each side)	7 pieces
Number of Carrier Rollers (each side)	2 pieces

Sound Performance

Operator – ISO 6396	71 dB(A)
Spectator – ISO 6395	101 dB(A)

- When properly installed and maintained, the cab offered by Caterpillar, when tested with doors and windows closed according to ANSI/SAE J1166 OCT98, meets OSHA and MSHA requirements for operator sound exposure limits in effect at time of manufacture.
- 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.

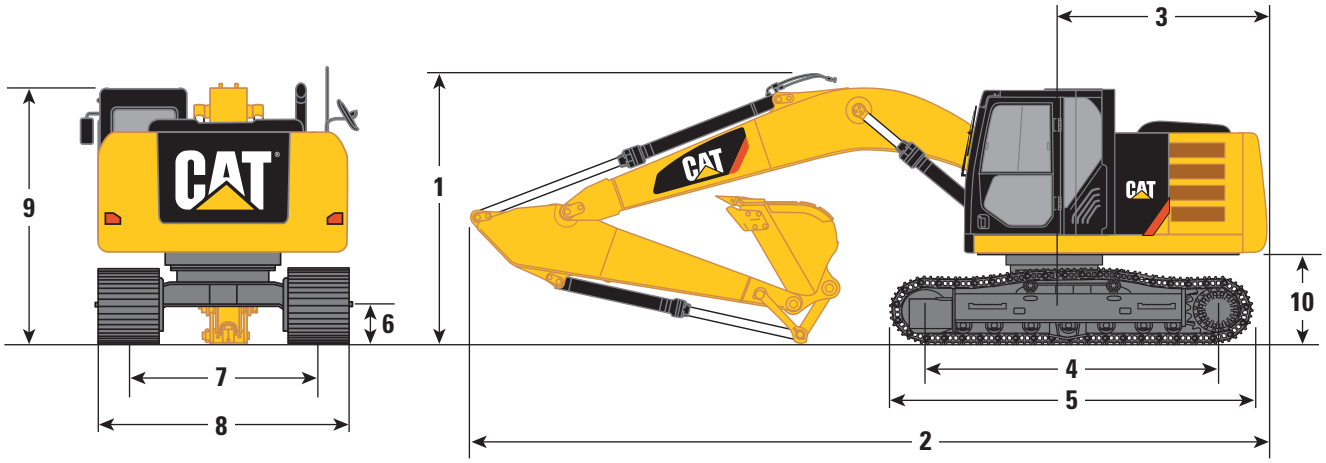
Standards

Brakes	ISO 10265 2008
ROPS cab	ISO 12117-2
Cab/OPG	ISO 10262 1998

316E Hydraulic Excavator Specifications

Dimensions

All dimensions are approximate.



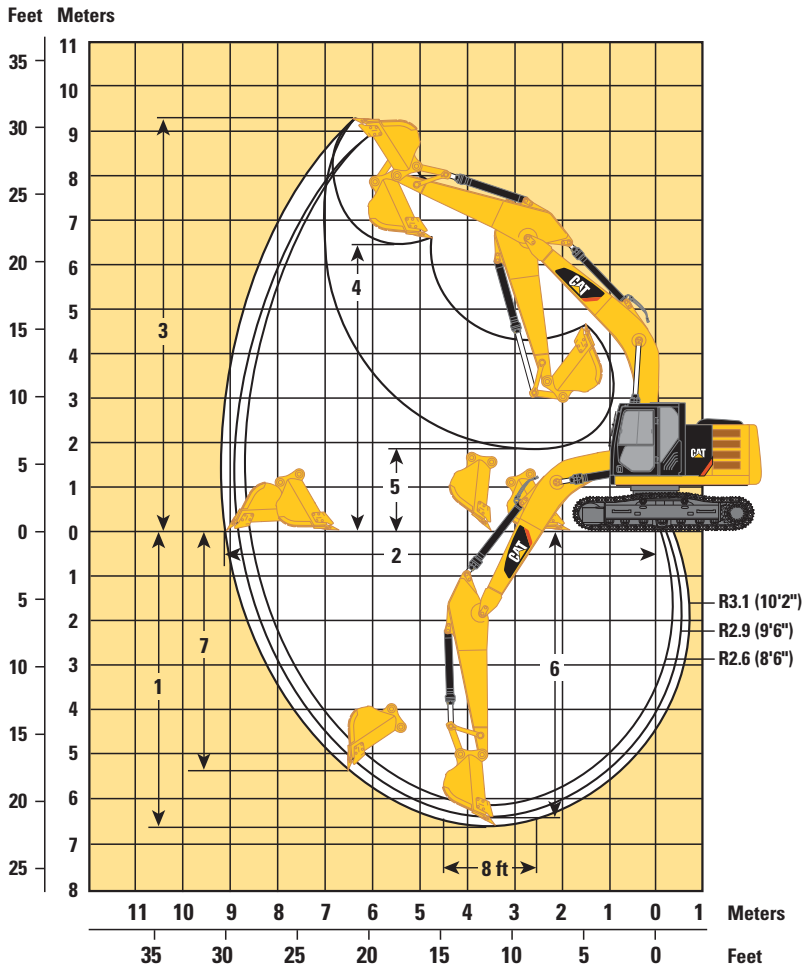
		Reach Booms 5.1 m (16'9")		
	Stick	**R3.1 (10'2")**	**R2.9 (9'6")**	**R2.6 (8'6")**
		mm (ft)	**mm (ft)**	**mm (ft)**
1	Shipping Height*	3370 (11'1")	3090 (10'2")	3090 (10'2")
	Shipping Height at Boom Top	3370 (11'1")	3080 (10'1")	3020 (9'11")
	Shipping Height with Guard Rail	3090 (10'2")	3090 (10'2")	3090 (10'2")
	Shipping Height with Top Guard	3100 (10'2")	3100 (10'2")	3100 (10'2")
2	Shipping Length	8570 (28'1")	8580 (28'2")	8570 (28'1")
3	Tail Swing Radius	2500 (8'2")	2500 (8'2")	2500 (8'2")
4	Length to Center of Rollers	3170 (10'5")	3170 (10'5")	3170 (10'5")
5	Track Length	3970 (13'0")	3970 (13'0")	3970 (13'0")
6	Ground Clearance	440 (1'5")	440 (1'5")	440 (1'5")
7	Track Gauge	1990 (6'6")	1990 (6'6")	1990 (6'6")
8	Transport Width			
	500 mm (20") Shoes	2520 (8'3")	2520 (8'3")	2520 (8'3")
	600 mm (24") Shoes	2590 (8'6")	2590 (8'6")	2590 (8'6")
	700 mm (28") Shoes	2690 (8'10")	2690 (8'10")	2690 (8'10")
9	Cab Height	2890 (9'6")	2890 (9'6")	2890 (9'6")
	Cab Height with Top Guard	3100 (10'2")	3100 (10'2")	3100 (10'2")
10	Counterweight Clearance**	1010 (3'4")	1010 (3'4")	1010 (3'4")

*Including shoe lug height.

**Without shoe lug height.

Working Ranges

All dimensions are approximate.



	Reach Booms 5.1 m (16'9")		
Stick	**R3.1 (10'2")**	**R2.9 (9'6")**	**R2.6 (8'6")**
	mm (ft)	**mm (ft)**	**mm (ft)**
1 Maximum Digging Depth	6590 (21'7")	6390 (21'0")	6090 (20'0")
2 Maximum Reach at Ground Level	9260 (30'5")	8990 (29'6")	8780 (28'10")
3 Maximum Cutting Height	9210 (30'3")	8880 (29'2")	8920 (29'3")
4 Maximum Loading Height	6570 (21'7")	6270 (20'7")	6280 (20'7")
5 Minimum Loading Height	1810 (5'11")	2000 (6'7")	2300 (7'7")
6 Maximum Depth Cut for 2440 mm (8'0") Level Bottom	6400 (21'0")	6160 (20'3")	5870 (19'3")
7 Maximum Vertical Wall Digging Depth	5400 (17'9")	4910 (16'1")	4930 (16'2")

316E Hydraulic Excavator Specifications

Operating Weight and Ground Pressure

	700 mm (28") Triple Grouser Shoes		600 mm (24") Triple Grouser Shoes		500 mm (20") Triple Grouser Shoes	
	kg (lb)	kPa (psi)	kg (lb)	kPa (psi)	kg (lb)	kPa (psi)
Reach Boom – 5.1 m (16'9")						
R3.1 (10'2")	17 800 (39,242)	36 (5.22)	17 600 (38,801)	42 (6.09)	17 400 (38,367)	49 (7.1)
R2.9 (9'6")	17 800 (39,242)	36 (5.22)	17 600 (38,801)	42 (6.09)	17 400 (38,367)	49 (7.1)
R2.6 (8'6")	17 700 (39,022)	36 (5.22)	17 500 (38,581)	41 (5.95)	17 300 (38,147)	49 (7.1)

Major Component Weights

	kg	lb
Base Machine (with boom cylinder, without counterweight, front linkage and track)	5720	12,610
Long Undercarriage	3770	8,310
Counterweight 2.8 mt (3.1 t)	2800	6,170
Boom (includes lines, pins and stick cylinder)		
Reach Boom – 5.1 m (16'9")	1320	2,910
Reach Boom – 5.1 m (16'9") for CGC	1330	2,930
Stick (includes lines, pins, bucket cylinder, and bucket linkage)		
R3.1 (10'2")	930	2,050
R2.9 (9'6")	910	2,010
R2.6 (8'6")	840	1,850
Track Shoe (Long/per two tracks)		
500 mm (20") Triple Grouser	2190	4,830
600 mm (24") Triple Grouser	2420	5,340
700 mm (28") Triple Grouser	2650	5,840

All weights are rounded up to nearest 10 kg and lb except for buckets. Kg and lb were rounded up separately so some of the kg and lb do not match.

Base machine includes 75 kg (165 lb) operator weight, 90% fuel weight, and undercarriage with center guard.

Bucket and Stick Forces

	Reach Booms 5.1 m (16'9")		
Stick	**R3.1 (10'2")**	**R2.9 (9'6")**	**R2.6 (8'6")**
	kN (lbf)	**kN (lbf)**	**kN (lbf)**
General Duty			
Bucket Digging Force (SAE)	98 (22,000)	98 (22,000)	98 (22,000)
Stick Digging Force (SAE)	69 (15,500)	73 (16,400)	77 (17,300)
Severe Duty			
Bucket Digging Force (SAE)	96 (21,600)	96 (21,600)	96 (21,600)
Stick Digging Force (SAE)	69 (15,500)	72 (16,200)	77 (17,300)

316E Hydraulic Excavator Specifications

Reach Boom Lift Capacities

 Load Point Height

 Load at Maximum Reach

 Load Radius Over Front

 Load Radius Over Side

Boom – 5.1 m (16'9")
Stick – R3.1 (10'2")
Counterweight – 2.8 mt (3.1 t)
Shoes – 700 mm (28") triple grouser
Bucket – None

		1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft				
														m ft
7.5 m **25.0 ft**	kg **lb**											*2700 ***6,050**	*2700 ***6,050**	5.49 **17.57**
6.0 m **20.0 ft**	kg **lb**							*3650 ***7,850**	3450 **7,400**			*2450 ***5,350**	*2450 ***5,350**	6.76 **21.96**
4.5 m **15.0 ft**	kg **lb**							*3850 ***8,450**	3400 **7,250**	*2450	2350	*2350 ***5,150**	2300 **5,100**	7.52 **24.58**
3.0 m **10.0 ft**	kg **lb**			*7450 ***15,850**	*7450 ***15,850**	*5300 ***11,400**	4950 **10,700**	*4450 ***9,650**	3250 **6,950**	3650 ***7,500**	2300 **4,850**	*2400 ***5,250**	2050 **4,550**	7.93 **25.98**
1.5 m **5.0 ft**	kg **lb**			*7550 ***18,100**	*7550 **17,700**	*6700 ***14,450**	4600 **9,900**	5000 **10,750**	3050 **6,550**	3600 **7,700**	2200 **4,700**	*2550 ***5,550**	2000 **4,350**	8.03 **26.36**
Ground Line	kg **lb**			*6650 ***15,300**	*6650 ***15,300**	7500 **16,100**	4350 **9,300**	4850 **10,400**	2900 **6,250**	3500 **7,550**	2150 **4,600**	*2800 ***6,150**	2000 **4,400**	7.85 **25.77**
–1.5 m **–5.0 ft**	kg **lb**	*5050 ***11,250**	*5050 ***11,250**	*9300 ***21,150**	7700 **16,550**	7350 **15,800**	4200 **9,050**	4750 **10,250**	2850 **6,100**			*3350 ***7,350**	2150 **4,750**	7.36 **24.12**
–3.0 m **–10.0 ft**	kg **lb**	*8400 ***18,850**	*8400 ***18,850**	*11 350 ***24,500**	7800 **16,750**	7350 **15,800**	4200 **9,050**	4800 **10,300**	2850 **6,150**			4300 **9,500**	2600 **5,700**	6.49 **21.18**
–4.5 m **–15.0 ft**	kg **lb**			*9000 ***19,200**	8050 **17,300**	*6100 ***12,850**	4350 **9,450**					*5150 ***11,400**	3750 **8,500**	5.04 **16.24**

Boom – 5.1 m (16'9")
Stick – R2.9 (9'6")
Counterweight – 2.8 mt (3.1 t)
Shoes – 700 mm (28") triple grouser
Bucket – None

		1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft				
														m ft
7.5 m **25.0 ft**	kg **lb**											*2950 ***6,500**	*2950 ***6,500**	5.08 **16.21**
6.0 m **20.0 ft**	kg **lb**							*3650 ***7,350**	3450 **7,350**			*2650 ***5,800**	*2650 ***5,800**	6.43 **20.89**
4.5 m **15.0 ft**	kg **lb**							*4050 ***8,850**	3350 **7,250**			*2550 ***5,650**	2500 **5,450**	7.23 **23.63**
3.0 m **10.0 ft**	kg **lb**			*8000 ***17,000**	*8000 ***17,000**	*5500 ***11,900**	4950 **10,600**	*4600 ***10,000**	3200 **6,900**	*3300 ***6,050**	2300 **4,850**	*2650 ***5,800**	2200 **4,850**	7.66 **25.09**
1.5 m **5.0 ft**	kg **lb**			*7100 ***17,000**	*7100 ***17,000**	*6900 ***14,900**	4550 **9,850**	5000 **10,750**	3050 **6,550**	3600 **7,700**	2200 **4,750**	*2850 ***6,250**	2100 **4,600**	7.77 **25.48**
Ground Line	kg **lb**			*7050 ***16,150**	*7050 ***16,150**	7500 **16,050**	4300 **9,300**	4850 **10,450**	2950 **6,300**	3500	2150	*3200 ***7,050**	2100 **4,650**	7.58 **24.87**
–1.5 m **–5.0 ft**	kg **lb**	*5700 ***12,750**	*5700 ***12,750**	*10 100 ***22,900**	7750 **16,600**	7350 **15,800**	4200 **9,100**	4800 **10,300**	2850 **6,150**			3800 **8,400**	2300 **5,100**	7.07 **23.16**
–3.0 m **–10.0 ft**	kg **lb**	*9300 ***20,850**	*9300 ***20,850**	*11 100 ***23,950**	7850 **16,800**	7400 **15,900**	4250 **9,150**	4800 **10,350**	2900 **6,250**			4650 **10,300**	2800 **6,200**	6.16 **20.07**
–4.5 m **–15.0 ft**	kg **lb**			*8550 ***18,150**	8100 **17,450**	*5700	4450					*5550 ***12,150**	4300 **9,800**	4.60 **14.75**

*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.

Reach Boom Lift Capacities

 Load Point Height  Load at Maximum Reach  Load Radius Over Front  Load Radius Over Side

Boom – 5.1 m (16'9") **Counterweight** – 2.8 mt (3.1 t) **Bucket** – None

Stick – R2.6 (8'6") **Shoes** – 700 mm (28") triple grouser

		1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft				
														m ft
7.5 m **25.0 ft**	kg **lb**					***7,500**	***7,500**					*3250 ***7,300**	*3250 ***7,300**	4.76 **15.09**
6.0 m **20.0 ft**	kg **lb**							*3500 ***6,450**	3400 ***6,450**			*2850 ***6,350**	*2850 ***6,350**	6.18 **20.05**
4.5 m **15.0 ft**	kg **lb**					*4600 ***10,000**	*4600 ***10,000**	*4300 ***9,400**	3350 **7,200**			*2750 ***6,100**	2600 **5,750**	7.01 **22.89**
3.0 m **10.0 ft**	kg **lb**			*8850 ***18,850**	*8850 ***18,850**	*5900 ***12,650**	4900 **10,550**	*4800 ***10,450**	3200 **6,900**			*2800 ***6,200**	2300 **5,100**	7.44 **24.39**
1.5 m **5.0 ft**	kg **lb**					*7200 ***15,550**	4550 **9,800**	5000 **10,750**	3050 **6,600**	*3400	2250	*3000 ***6,600**	2200 **4,800**	7.56 **24.80**
Ground Line	kg **lb**			*6250 ***14,400**	*6250 ***14,400**	7500 **16,100**	4350 **9,350**	4900 **10,500**	2950 **6,350**			*3400 ***7,450**	2250 **4,900**	7.36 **24.16**
–1.5 m **–5.0 ft**	kg **lb**	*5750 ***12,800**	*5750 ***12,800**	*10 150 ***23,100**	7850 **16,850**	7450 **15,950**	4300 **9,200**	4800 **10,350**	2900 **6,250**			4050 **8,850**	2450 **5,400**	6.84 **22.40**
–3.0 m **–10.0 ft**	kg **lb**	*9950 ***22,400**	*9950 ***22,400**	*10 750 ***23,200**	8000 **17,100**	*7450 ***16,000**	4350 **9,300**					5000 **11,150**	3050 **6,750**	5.89 **19.19**
–4.5 m **–15.0 ft**	kg **lb**			*7750 ***16,300**	*7750 ***16,300**							*5400 ***11,900**	4950 **11,350**	4.23 **13.51**

Boom – 5.1 m (16'9") **Counterweight** – 2.8 mt (3.1 t) **Bucket** – None

Stick – R3.1 (10'2") **Shoes** – 600 mm (24") triple grouser

		1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft				
														m ft
7.5 m **25.0 ft**	kg **lb**											*2700 ***6,050**	*2700 ***6,050**	5.49 **17.57**
6.0 m **20.0 ft**	kg **lb**							*3650 ***7,850**	3400 **7,300**			*2450 ***5,350**	*2450 ***5,350**	6.76 **21.96**
4.5 m **15.0 ft**	kg **lb**							*3850 ***8,450**	3350 **7,150**	*2450	2300	*2350 ***5,150**	2300 **5,050**	7.52 **24.58**
3.0 m **10.0 ft**	kg **lb**			*7450 ***15,850**	*7450 ***15,850**	*5300 ***11,400**	4900 **10,550**	*4450 ***9,650**	3200 **6,850**	3600 ***7,500**	2250 **4,800**	*2400 ***5,250**	2050 **4,500**	7.93 **25.98**
1.5 m **5.0 ft**	kg **lb**			*7550 ***18,100**	*7550 **17,500**	*6700 ***14,450**	4550 **9,750**	4950 **10,600**	3000 **6,500**	3550 **7,550**	2150 **4,650**	*2550 ***5,550**	1950 **4,250**	8.03 **26.36**
Ground Line	kg **lb**			*6650 ***15,300**	*6650 ***15,300**	7400 **15,850**	4250 **9,200**	4800 **10,250**	2900 **6,200**	3450 **7,450**	2100 **4,500**	*2800 ***6,150**	1950 **4,300**	7.85 **25.77**
–1.5 m **–5.0 ft**	kg **lb**	*5050 ***11,250**	*5050 ***11,250**	*9300 ***21,150**	7600 **16,300**	7250 **15,550**	4150 **8,950**	4700 **10,100**	2800 **6,000**			*3350 ***7,350**	2150 **4,700**	7.36 **24.12**
–3.0 m **–10.0 ft**	kg **lb**	*8400 ***18,850**	*8400 ***18,850**	*11 350 ***24,500**	7700 **16,500**	7250 **15,600**	4150 **8,950**	4700 **10,150**	2800 **6,050**			4250 **9,350**	2550 **5,650**	6.49 **21.18**
–4.5 m **–15.0 ft**	kg **lb**			*9000 ***19,200**	7950 **17,100**	*6100 ***12,850**	4300 **9,300**					*5150 ***11,400**	3700 **8,400**	5.04 **16.24**

*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.

316E Hydraulic Excavator Specifications

Reach Boom Lift Capacities

 Load Point Height

 Load at Maximum Reach

 Load Radius Over Front

 Load Radius Over Side

Boom – 5.1 m (16'9")
Stick – R2.9 (9'6")
Counterweight – 2.8 mt (3.1 t)
Shoes – 600 mm (24") triple grouser
Bucket – None

		1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft				
														m ft
7.5 m **25.0 ft**	kg **lb**											*2950 ***6,500**	*2950 ***6,500**	5.08 **16.21**
6.0 m **20.0 ft**	kg **lb**							*3650 ***7,350**	3400 **7,250**			*2650 ***5,800**	*2650 ***5,800**	6.43 **20.89**
4.5 m **15.0 ft**	kg **lb**							*4050 ***8,850**	3350 **7,150**			*2550 ***5,650**	2450 **5,400**	7.23 **23.63**
3.0 m **10.0 ft**	kg **lb**			*8000 ***17,000**	*8000 ***17,000**	*5500 ***11,900**	4900 **10,500**	*4600 ***10,000**	3200 **6,850**	*3300 ***6,050**	2250 **4,800**	*2650 ***5,800**	2150 **4,800**	7.66 **25.09**
1.5 m **5.0 ft**	kg **lb**			*7100 ***17,000**	*7100 ***17,000**	*6900 ***14,900**	4500 **9,700**	4950 **10,600**	3000 **6,500**	3550 **7,600**	2200 **4,650**	*2850 ***6,250**	2050 **4,550**	7.77 **25.48**
Ground Line	kg **lb**			*7050 ***16,150**	*7050 ***16,150**	7400 **15,850**	4250 **9,150**	4800 **10,300**	2900 **6,200**	3500	2100	*3200 ***7,050**	2100 **4,600**	7.58 **24.87**
–1.5 m **–5.0 ft**	kg **lb**	*5700 ***12,750**	*5700 ***12,750**	*10 100 ***22,900**	7650 **16,350**	7250 **15,600**	4150 **8,950**	4700 **10,150**	2800 **6,050**			3750 **8,250**	2300 **5,000**	7.07 **23.16**
–3.0 m **–10.0 ft**	kg **lb**	*9300 ***20,850**	*9300 ***20,850**	*11 100 ***23,950**	7750 **16,600**	7300 **15,650**	4200 **9,000**	4750 **10,250**	2850 **6,150**			4600 **10,200**	2750 **6,100**	6.16 **20.07**
–4.5 m **–15.0 ft**	kg **lb**			*8550 ***18,150**	8000 **17,250**	*5700	4400					*5550 ***12,150**	4250 **9,650**	4.60 **14.75**

Boom – 5.1 m (16'9")
Stick – R2.6 (8'6")
Counterweight – 2.8 mt (3.1 t)
Shoes – 600 mm (24") triple grouser
Bucket – None

		1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft				
														m ft
7.5 m **25.0 ft**	kg **lb**					***7,500**	***7,500**					*3250 ***7,300**	*3250 ***7,300**	4.76 **15.09**
6.0 m **20.0 ft**	kg **lb**							*3500 ***6,450**	3350 ***6,450**			*2850 ***6,350**	*2850 ***6,350**	6.18 **20.05**
4.5 m **15.0 ft**	kg **lb**					*4600 ***10,000**	*4600 ***10,000**	*4300 ***9,400**	3300 **7,100**			*2750 ***6,100**	2550 **5,700**	7.01 **22.89**
3.0 m **10.0 ft**	kg **lb**			*8850 ***18,850**	*8850 ***18,850**	*5900 ***12,650**	4850 **10,400**	*4800 ***10,450**	3200 **6,850**			*2800 ***6,200**	2300 **5,000**	7.44 **24.39**
1.5 m **5.0 ft**	kg **lb**					*7200 ***15,550**	4500 **9,700**	4950 **10,600**	3050 **6,500**	*3400	2200	*3000 ***6,600**	2150 **4,750**	7.56 **24.80**
Ground Line	kg **lb**			*6250 ***14,400**	*6250 ***14,400**	7400 **15,900**	4300 **9,250**	4800 **10,350**	2900 **6,250**			*3400 ***7,450**	2200 **4,850**	7.36 **24.16**
–1.5 m **–5.0 ft**	kg **lb**	*5750 ***12,800**	*5750 ***12,800**	*10 150 ***23,100**	7750 **16,600**	7350 **15,700**	4200 **9,100**	4750 **10,250**	2850 **6,150**			3950 **8,750**	2400 **5,350**	6.84 **22.40**
–3.0 m **–10.0 ft**	kg **lb**	*9950 ***22,400**	*9950 ***22,400**	*10 750 ***23,200**	7850 **16,900**	7400 **15,850**	4250 **9,200**					4950 **11,000**	3000 **6,650**	5.89 **19.19**
–4.5 m **–15.0 ft**	kg **lb**			*7750 ***16,300**	*7750 ***16,300**							*5400 ***11,900**	4900 **11,200**	4.23 **13.51**

*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.

Work Tool Offering Guide*

Boom Type	Reach Boom		
Stick Size	**R3.1 (10'2")**	**R2.9 (9'6")**	**R2.6 (8'6")**
Hydraulic Hammer	H110Es H115Es H120Es	H110Es H115Es H120Es	H110Es H115Es H120Es
Pulverizer	P215	P215	P215
Mobile Scrap and Demolition Shear	S325B**	S325B**	S325B**
Compactor (Vibratory Plate)	CVP75	CVP75	CVP75
Contractors' Grapple	G115B	G115B	G115B
Trash Grapple	These work tools are available for the 316E. Consult your Cat dealer for proper match.		
Thumbs			
Center-Lock Pin Grabber Coupler			

*Matches are dependent on excavator configurations. Consult your Cat dealer for proper work tool match.

**Boom-mount.

316E Hydraulic Excavator Specifications

Bucket Specifications and Compatibility

	Width		Capacity		Weight		Fill	Reach Booms			
	mm	in	m^3	yd^3	kg	lb	%	R2.6 (8'6")	R2.9 (9'6")	R3.1 (10'2")	R3.1 (10'2") Thumb*
Without Quick Coupler											
General Duty (GD)	600	24	0.35	0.46	445	980	100%	●	●	●	●
	750	30	0.49	0.64	502	1,106	100%	●	●	●	●
	900	36	0.62	0.81	548	1,208	100%	●	●	●	●
	1050	42	0.76	1.00	595	1,312	100%	●	◉	◉	⊖
	1200	48	0.91	1.19	672	1,480	100%	X	⊖	X	○
Severe Duty (SD)	600	24	0.35	0.46	496	1,093	90%	●	●	●	●
	750	30	0.49	0.64	564	1,243	90%	●	●	●	●
	900	36	0.62	0.81	644	1,420	90%	●	●	●	●
	1050	42	0.76	1.00	689	1,519	90%	●	●	◉	◉
	1200	48	0.91	1.19	762	1,678	90%	X	⊖	X	○
						Maximum load pin-on (payload + bucket)	kg	2205	2095	1945	1875
							lb	4,860	4,617	4,287	4,133
With Center Lock Quick Coupler											
General Duty (GD)	600	24	0.35	0.46	445	980	100%	●	●	●	●
	750	30	0.49	0.64	502	1,106	100%	●	●	●	●
	900	36	0.62	0.81	548	1,208	100%	●	◉	⊖	⊖
	1050	42	0.76	1.00	595	1,312	100%	⊖	⊖	○	○
	1200	48	0.91	1.19	672	1,480	100%	○	◇	◇	◇
Severe Duty (SD)	600	24	0.35	0.46	496	1,093	90%	●	●	●	●
	750	30	0.49	0.64	564	1,243	90%	●	●	●	●
	900	36	0.62	0.81	644	1,420	90%	●	◉	⊖	⊖
	1050	42	0.76	1.00	689	1,519	90%	⊖	⊖	○	○
	1200	48	0.91	1.19	762	1,678	90%	○	○	◇	◇
						Maximum load with coupler (payload + bucket)	kg	1815	1705	1555	1485
							lb	4,000	3,758	3,427	3,273

The above loads are in compliance with hydraulic excavator standard EN474, they do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity with front linkage fully extended at ground line with bucket curled.

Capacity based on ISO 7451.

Bucket weight with General Duty tips.

* Densities with 3.1 m (10'2") thumb stick does not consider thumb weight.

Maximum Material Density:

●	2100 kg/m^3 (3,500 lb/yd^3)
◉	1800 kg/m^3 (3,000 lb/yd^3)
⊖	1500 kg/m^3 (2,500 lb/yd^3)
○	1200 kg/m^3 (2,000 lb/yd^3)
◇	900 kg/m^3 (1,500 lb/yd^3)
X	Not recommended

Caterpillar recommends using appropriate work tools to maximize the value customers receive from our products. Use of work tools, including buckets, which are outside of Caterpillar's recommendations or specifications for weight, dimensions, flows, pressures, etc. may result in less-than-optimal performance, including but not limited to reductions in production, stability, reliability, and component durability. Improper use of a work tool resulting in sweeping, prying, twisting and/or catching of heavy loads will reduce the life of the boom and stick.

Standard Equipment

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

ENGINE
- C4.4 diesel engine
- Biodiesel capable
- Meets EPA Tier 4 Interim emission standards
- 2300 m (7,500 ft) altitude capability
- Electric priming pump
- Automatic engine speed control
- Economy and high power modes
- Two-speed travel
- Side-by-side cooling system
- Radial seal air filter
- Primary filter with water separator and water separator indicator
- Secondary filter
- Screen filter in fuel line
- Cold weather battery –25° C (–13° F)
- Jump start receptacle

HYDRAULIC SYSTEM
- Regeneration circuit for boom and stick
- Reverse swing dampening valve
- Automatic swing parking brake
- High-performance hydraulic return filter
- Capability of installing HP stackable valve and medium and QC valve
- Capability of installing additional auxiliary pump and circuit
- Capability of installing boom lowering control device and stick lowering check valve
- Fine swing control

CAB
- Pressurized operator station with positive filtration
- Sliding upper door window (left-hand cab door)
- Glass-breaking safety hammer
- Removable lower windshield with in cab storage bracket
- Coat hook
- Beverage holder
- Literature holder
- AM/FM radio
- Radio with MP3 auxiliary audio port
- Two 12V stereo speakers
- Storage shelf suitable for lunch or toolbox
- Color LCD display with indicators, filter/fluid change, and working hour information
- Adjustable armrest
- Height adjustable joystick consoles
- Neutral lever (lock out) for all controls
- Travel control pedals with removable hand levers
- Capability of installing two additional pedals
- Two power outlets, 10 amp (total)
- Travel alarm
- Laminated glass front upper window and tempered other windows
- Sunscreen

UNDERCARRIAGE
- Grease Lubricated Track GLT2, resin seal
- Towing eye on base frame
- Swivel guard

COUNTERWEIGHT
- 2.8 mt (3.1 t)

ELECTRICAL
- 80 amp alternator
- Circuit breaker
- Capability to electrically connect a beacon

LIGHTS
- Halogen boom light (left side)
- Time delay function for boom light and cab light
- Exterior lights integrated into storage box

SECURITY
- Cat one key security system
- Door locks
- Cap locks on fuel and hydraulic tanks
- Lockable external tool/storage box
- Signaling/warning horn
- Secondary engine shutoff switch
- Openable skylight for emergency exit
- Rearview camera-ready

316E Optional Equipment

Optional Equipment

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

ENGINE
- Quick drains, engine and hydraulic oil

HYDRAULIC SYSTEM
- Control pattern quick-changer, two way
- Auxiliary hydraulics
- Boom and stick lines
- High-pressure line
- Medium-pressure line
- Cat quick coupler line – high-pressure capable
- Boom lowering and stick lowering control device
- Cat Bio hydraulic oil

CAB
- Cab hatch emergency exit
- Seat, high-back air suspension with heater and cooling
- Seat, high-back air suspension with heater
- Seat, high-back mechanical suspension
- Windshield wiper, lower with washer
- Air pre-filter
- Left foot switch
- Left pedal
- Straight travel pedal
- Rain protector
- Cab mirror
- Ashtray

UNDERCARRIAGE
- 500 mm (20") triple grouser shoes
- 600 mm (24") triple grouser shoes
- 700 mm (28") triple grouser shoes
- Full-length track guiding guard
- Guard, heavy-duty bottom
- Center track guiding guard
- Segmented (2 piece) track guiding guard

FRONT LINKAGE
- Quick coupler
- Bucket linkage, without lifting eye
- 5.1 m (16'9") reach boom
- 2.6 m (8'6") stick
- 2.9 m (9'6") stick
- 3.1 m (10'2") stick
- 3.1 m (10'2") thumb-ready stick

LIGHTS
- Working lights, cab mounted with time delay
- HID lights, cab mounted with time delay
- Halogen boom lights (right side)

SECURITY
- FOGS, bolt-on
- Side steel bumper
- Guard rail
- Guard, cab front, mesh
- Guard, vandalism
- Rearview camera

TECHNOLOGY
- Cat Grade Control Depth and Slope
- Product Link

Notes

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 Cat dealer for available options.

AEHQ6433-01 (05-2013)
Replaces AEHQ6433
(Americas)