



313 GC

Hydraulic Excavator

Technical Specifications

Configurations and features may vary by region. Please consult your Cat® dealer for availability in your area.

Table of Contents

Specifications	2
Engine	2
Swing Mechanism	2
Weights	2
Track	2
Drive	2
Hydraulic System	2
Service Refill Capacities	3
Standards	3
Sound Performance	3
Air Conditioning System	3
Operating Weights and Ground Pressures	4
Major Component Weights	4
Dimensions	5
Working Ranges and Forces	6
Bucket Specifications and Compatibility	7
Attachments Offering Guide	8
Standard and Optional Equipment	9
Dealer Installed Kits and Attachments	10
313 GC Environmental Declaration	11

313 GC Hydraulic Excavator Specifications

Engine

Engine Model	Cat® C3.6	
Net Power		
ISO 9249	70.6 kW	94.7 hp
ISO 9249 (DIN)	96 hp (metric)	
Engine Power		
ISO 14396	74.4 kW	100 hp
ISO 14396 (DIN)	101 hp (metric)	
Bore	98 mm	4 in
Stroke	120 mm	5 in
Displacement	3.6 L	220 in ³
Biodiesel Capability	Up to B20 ⁽¹⁾	

- The 313 GC meets China Nonroad Stage IV emissions standards.
- No engine power derating required below 3000 m (9,840 ft) altitude.
- Advertised power is tested per the specified standard in effect at the time of manufacture.
- Rating at 2,200 rpm.

⁽¹⁾ Cat diesel engines are required to use ULSD (ultra-low sulfur diesel fuel with 15 ppm of sulfur or less) or ULSD blended with the following lower-carbon intensity fuels up to:

- ✓ 20% biodiesel FAME (fatty acid methyl ester)*
- ✓ 100% renewable diesel, HVO (hydrogenated vegetable oil) and GTL (gas-to-liquid) fuels

Refer to guidelines for successful application. Please consult your Cat dealer or “Caterpillar Machine Fluids Recommendations” (SEBU6250) for details.

*Engines with no aftertreatment devices can use higher blends, up to 100% biodiesel.

Swing Mechanism

Swing Speed	11.5 rpm	
Maximum Swing Torque	43 kN·m	31,641 lbf·ft

Weights

Operating Weight	12 400 kg	27,200 lb
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- Standard undercarriage, Reach boom, R2.5 (8'2") stick, GD 0.53 m³ (0.69 yd³) bucket, 500 mm (20") triple grouser shoes, 2250 kg (4,960 lb) counterweight, and HP/Aux lines.

Track

Track Shoes Width	500 mm	20 in
Optional Track Shoes Width	600 mm	24 in
Number of Shoes (each side)	43	
Number of Track Rollers (each side)	6	
Number of Carrier Rollers (each side)	1	

Drive

Gradeability	35°/70%	
Maximum Travel Speed	5.4 km/h	3.4 mph
Maximum Drawbar Pull	117 kN	26,370 lbf

Hydraulic System

Main System – Maximum Flow – Implement	247 L/min	65 gal/min
Maximum Pressure – Equipment – Normal	35 000 kPa	5,076 psi
Maximum Pressure – Travel	35 000 kPa	5,076 psi
Maximum Pressure – Swing	25 900 kPa	3,756 psi
Boom Cylinder – Bore	105 mm	4 in
Boom Cylinder – Stroke	1015 mm	40 in
Stick Cylinder – Bore	115 mm	5 in
Stick Cylinder – Stroke	1197 mm	47 in
Bucket Cylinder – Bore	95 mm	4 in
Bucket Cylinder – Stroke	939 mm	37 in

313 GC Hydraulic Excavator Specifications

Service Refill Capacities

Fuel Tank	237 L	62.6 gal
Cooling System	11 L	2.9 gal
Engine Oil	11 L	2.9 gal
Final Drive (each)	3 L	0.8 gal
Hydraulic System (including tank)	145 L	38.3 gal
Hydraulic Tank	77 L	20.3 gal

Standards

Brakes	ISO 10265:2008
Cab/Falling Object Guard System (FOGS)	ISO 10262:1998

Sound Performance

GB 16710:2010 (external)	103 dB(A)
GB 16710:2010 (inside cab)	80 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 a noisy environment.

Air Conditioning System

- The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 0.85 kg of refrigerant which has a CO₂ equivalent of 1.216 metric tonnes.

313 GC Hydraulic Excavator Specifications

Operating Weights and Ground Pressures

	500 mm (20") Triple Grouser Shoes		600 mm (24") Triple Grouser Shoes	
	Weight kg (lb)	Ground Pressure kPa (psi)	Weight kg (lb)	Ground Pressure kPa (psi)
Base Machine Configurations				
Base Frame with Track Rollers and Carrier Rollers				
2250 kg (4,960 lb) Counterweight and Standard Undercarriage Base Machine				
Reach Boom + R2.5 m (8'2") Stick + 0.53 m ³ (0.69 yd ³) GD Bucket, HP/Aux Lines	12 400 (27,200)	40.0 (5.8)	12 600 (27,800)	34.0 (4.9)

All operating weights include a 90% fuel tank with 75 kg (165 lb) operator.

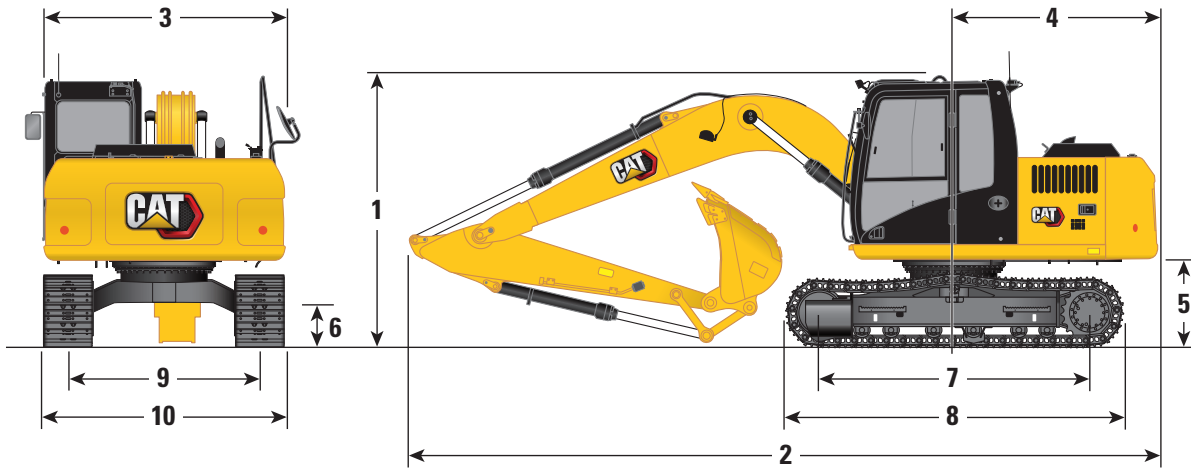
Major Component Weights

	kg	lb
Base Machine (with upper frame, standard undercarriage, counterweight – does not include boom, stick, bucket, stick cylinder, bucket cylinder, tracks, 90% fuel tank and 75 kg [165 lb] operator).	8290	18,300
Track Shoes:		
500 mm (20") Width, 3450 mm (11'4") Triple Grouser Track Shoes	1430	3,150
600 mm (24") Width, 3450 mm (11'4") Triple Grouser Track Shoes	1690	3,720
Two Boom Cylinders	240	530
Weight of 90% Fuel Tank and 75 kg (165 lb) Operator	260	570
Counterweight:		
2250 kg (4,960 lb) Counterweight	2250	4,960
Swing Frame	1140	2,510
Undercarriage (base frame with track rollers and carrier rollers)	2520	5,500
Booms (including lines, pins, stick cylinder):		
Reach Boom 4.65 m (15'3")	1050	2,310
Reach Boom 4.65 m (15'3") with HP/Aux Lines	1090	2,400
Sticks (including lines, pins, bucket cylinder, bucket linkage):		
Reach Stick 2.5 m (8'2")	570	1,260
Reach Stick 2.5 m (8'2") with HP/Aux Lines	610	1,340
Buckets (without linkage, with tips and side cutters):		
0.53 m ³ (0.69 yd ³) UD	410	900
0.53 m ³ (0.69 yd ³) GD	420	930

313 GC Hydraulic Excavator Specifications

Dimensions

All dimensions are approximate and may vary depending on bucket selection.



Boom Option

Reach Boom
4.65 m (15'3")

Stick Option

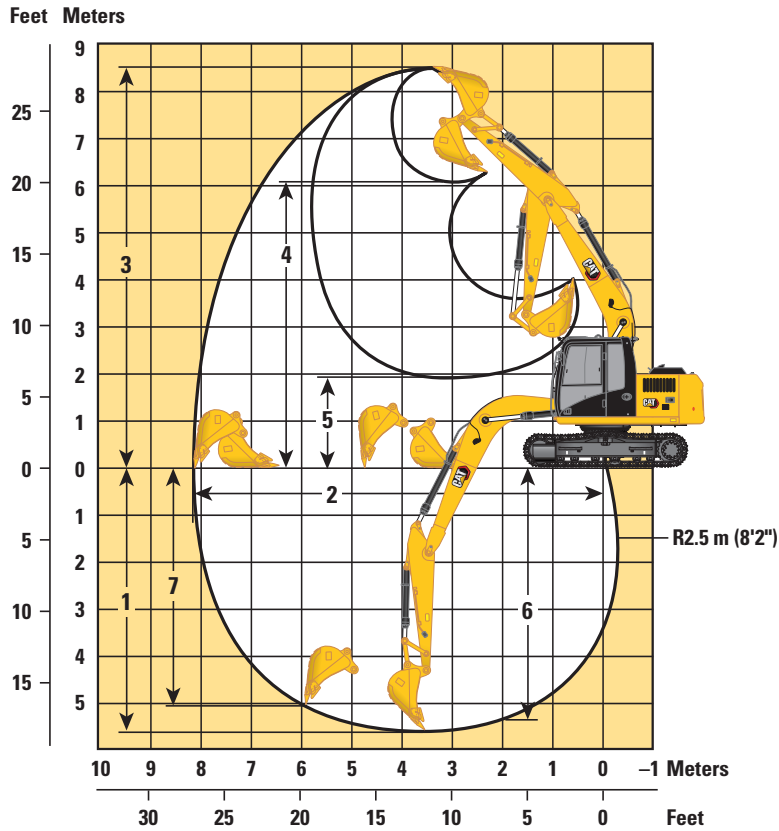
Reach Stick
2.5 m (8'2")

1 Machine Height		
Top of Cab Height	2780 mm	9'1"
Handrail Height	2820 mm	9'3"
With Boom/Stick/Bucket Installed	2810 mm	9'3"
With Boom/Stick Installed	2700 mm	8'10"
With Boom Installed	2170 mm	7'1"
2 Machine Length		
With Boom/Stick/Bucket Installed	7630 mm	25'0"
With Boom/Stick Installed	7630 mm	25'0"
With Boom Installed	6770 mm	22'3"
3 Upper Frame Width	2490 mm	8'2"
4 Tail Swing Radius	2160 mm	7'1"
5 Counterweight Clearance	895 mm	2'11"
6 Ground Clearance	425 mm	1'5"
7 Track Length – Length to Center of Rollers	2780 mm	9'1"
8 Track Length – Overall Track Length	3490 mm	11'5"
9 Track Gauge	1990 mm	6'6"
10 Undercarriage Width – 500 mm (20") Shoes	2490 mm	8'2"
Undercarriage Width – 600 mm (24") Shoes	2590 mm	8'6"
Bucket Type	GD	GD
Bucket Capacity	0.53 m ³	0.69 yd ³
Bucket Tip Radius	1000 mm	3'3"

313 GC Hydraulic Excavator Specifications

Working Ranges and Forces

All dimensions are approximate and may vary depending on bucket selection.



Boom Option	Reach Boom 4.65 m (15'3")	
Stick Option	Reach Stick 2.5 m (8'2")	
1 Maximum Digging Depth	5570 mm	18'3"
2 Maximum Reach at Ground Level	8210 mm	26'11"
3 Maximum Cutting Height	8530 mm	28'0"
4 Maximum Loading Height	6070 mm	19'11"
5 Minimum Loading Height	1980 mm	6'6"
6 Maximum Depth Cut for 2440 mm (8'0") Level Bottom	5370 mm	17'7"
7 Maximum Vertical Wall Digging Depth	5040 mm	16'6"
Minimum Working Equipment Radius	2440 mm	8'0"
Bucket Digging Force (ISO)	95.7 kN	21,510 lbf
Stick Digging Force (ISO)	68.2 kN	15,330 lbf
Bucket Type	GD	GD
Bucket Capacity	0.53 m ³	0.69 yd ³
Bucket Tip Radius	1000 mm	3'3"

313 GC Hydraulic Excavator Specifications

Bucket Specifications and Compatibility

	Linkage	Width		Capacity		Weight		Fill %	4.6 m (15'3") Reach Boom R2.5 m (8'2") Stick
		mm	in	m ³	yd ³	kg	lb		
Pin-On (No Quick Coupler)									
Utility Duty Excavation	312	900	36	0.53	0.69	392	864	100	●
General Duty Excavation	312	1000	39	0.53	0.69	398	877	100	●
	312	1000	39	0.60	0.78	423	932	100	○
Maximum load with pin-on (payload + bucket)								kg	1606
								lb	3,542

The above loads are in compliance with hydraulic excavator standard EN474-5:2006+A3:2013, 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 7451:2007.

Maximum Material Density:

- 2100 kg/m³ (3,500 lb/yd³)
- 1800 kg/m³ (3,000 lb/yd³)

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.

313 GC Hydraulic Excavator Specifications

Attachments Offering Guide

Not all attachments are available in all regions. Consult your Cat dealer for configurations available in your region.

Match

PIN-ON ATTACHMENTS

Boom Type

Reach
4.6 m (15'3")

Stick Length

R2.5 m (8'2")

Hydraulic Hammers	H110 Side Mount	✓
	H110 GC	✓
	H110 GC Side Mount	✓
	H110 GC S	✓
	H110 S	✓
	H115 GC	✓
	H115 GC Side Mount	✓
	H115 GC S	✓
	H115 S	✓
	Compactors (Vibratory Plate)	CVP75

313 GC Hydraulic Excavator Specifications

Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
BOOM AND STICKS			HYDRAULIC SYSTEM		
4.65 m (15'3") Reach boom	✓		Electronic main control valve	✓	
2.5 m (8'2") Reach stick	✓		Electronic control pump	✓	
CAB			Boom and stick regeneration circuits	✓	
Sound suppressed with viscous mounts	✓		Automatic hydraulic oil warm up	✓	
High-resolution 203 mm (8") LCD touchscreen monitor	✓		Automatic two-speed travel	✓	
Mechanically adjustable seat with headrest	✓		Hammer lines		✓
Automatic bi-level air conditioner	✓		Hammer floor pedal kit		✓
Keyless push-to-start engine control	✓		High performance hydraulic return filter	✓	
Floor-mounted adjustable consoles	✓		SAFETY AND SECURITY		
1-button joystick	✓		Anti-skid plating with countersunk bolts	✓	
AM/FM radio with USB and AUX port	✓		Handrail and handhold	✓	
24V DC outlet	✓		Lockable external tool/storage box	✓	
Cup holder and storage compartments	✓		Mirror package	✓	
70/30 tempered glass windshield	✓		Rearview camera		✓
Upper radial wiper with washer	✓		Signaling/warning horn	✓	
Openable steel hatch	✓		Swing alarm		✓
Dome light	✓		Hydraulic lockout lever	✓	
Washable floor mat	✓		SERVICE AND MAINTENANCE		
CAT TECHNOLOGY			Grouped location of filters	✓	
Cat Product Link™	✓		Radiator screen	✓	
ELECTRICAL SYSTEM			Scheduled Oil Sampling (S-O-S SM) ports	✓	
750 CCA maintenance-free batteries (×2)	✓		UNDERCARRIAGE AND STRUCTURES		
Electrical disconnect switch	✓		500 mm (20") triple grouser shoes	✓	
LED left-side boom and chassis lights	✓		600 mm (24") triple grouser shoes		✓
LED right-side boom light		✓	Center track guiding guard	✓	
LED cab light		✓	Grease lubricated track link	✓	
ENGINE			Bottom guards	✓	
Cat® C3.6 single turbo diesel engine	✓		Travel motor guards	✓	
Three selectable modes: Power, Smart, Eco	✓		2250 kg (4,960 lb) counterweight	✓	
52° C (125° F) high-ambient cooling capability	✓		Tie-down points	✓	
-18° C (-0.4° F) cold start capability	✓				
-25° C (-13° F) cold start capability		✓			
Electric fuel priming pump	✓				
Two-stage fuel filtration system	✓				
Sealed double-element air filter with pre-cleaner	✓				

313 GC Hydraulic Excavator Specifications

Dealer Installed Kits and Attachments

Attachments may vary. Consult your Cat dealer for details.

GUARDS

- Mesh guard full front (not compatible with cab light cover, rain protector)
- Mesh guard lower half front
- Falling Object Guard (FOGS)

SERVICE PARTS

- Hammer floor pedal kit

The following information applies to the machine at the time of final manufacture as configured for sale in the regions covered in this document. The content of this declaration is valid as of the date issued; however, content related to machine features and specifications are subject to change without notice. For additional information, please see the machine's Operation and Maintenance Manual.

For more information on sustainability in action and our progress, visit <https://caterpillar.com/sustainability/>.

Engine

- The 313 GC meets China Nonroad Stage IV emission standards.
- Cat diesel engines are required to use ULSD (ultra-low sulfur diesel fuel with 15 ppm of sulfur or less) or ULSD blended with the following lower-carbon intensity fuels:
 - ✓ Up to 20% biodiesel FAME (fatty acid methyl ester)*
 - ✓ Up to 100% renewable diesel, HVO (hydrogenated vegetable oil) and GTL (gas-to-liquid) fuelsRefer to guidelines for successful application. Please consult your Cat dealer or "Caterpillar Machine Fluids Recommendations" (SEBU6250) for details.
**Engines with no aftertreatment devices can use higher blends, up to 100% biodiesel.*

Air Conditioning System

- The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 0.85 kg (1.9 lb) of refrigerant which has a CO₂ equivalent of 1.216 metric tonnes (1.340 tons).

Paint

- Based on best available knowledge, the maximum allowable concentration, measured in parts per million (PPM), of the following heavy metals in paint are:
 - Barium < 0.01%
 - Cadmium < 0.01%
 - Chromium < 0.01%
 - Lead < 0.01%

Sound Performance

GB 16710:2010 (external) 103 dB(A)

GB 16710:2010 (inside cab) 80 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 a noisy environment.

Oils and Fluids

- Caterpillar factory fills with ethylene glycol coolants. Cat Diesel Engine Antifreeze/Coolant (DEAC) and Cat Extended Life Coolant (ELC) can be recycled. Consult your Cat dealer for more information.
- Cat Bio HYDO™ Advanced is an EU Ecolabel approved biodegradable hydraulic oil.
- Additional fluids are likely to be present, please consult the Operations and Maintenance Manual or the Application and Installation guide for complete fluid recommendations and maintenance intervals.

Features and Technology

- The following features and technology may contribute to fuel savings and/or carbon reduction. Features may vary. Consult your Cat dealer for details.
 - Advanced hydraulic systems balance power and efficiency
 - Automatic Engine Control (AEC) system reduces RPM when hydraulic demand is low
 - Smart mode matches machine power to digging requirements automatically
 - Eco mode minimizes fuel consumption for light applications
 - One-touch low idle with automatic engine speed control
 - Cut maintenance costs up to 20% with extended and synchronized intervals
 - Hydraulic return filter provides longer life with a 3,000-hour replacement interval

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.

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AEXQ3186-02 (09-2022)
Replaces AEXQ3186-01
Build Number: 05B
(China)

