



320 GC

Hydraulic Excavator

Technical Specifications

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

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320 GC Hydraulic Excavator Specifications

Engine

Engine Model	Cat® C4.4	
Net Power		
ISO 9249	107 kW	143 hp
ISO 9249 (DIN)	145 hp (metric)	
Engine Power		
ISO 14396	108 kW	145 hp
ISO 14396 (DIN)	147 hp (metric)	
Bore	105 mm	4 in
Stroke	127 mm	5 in
Displacement	4.4 L	269 in ³
Biodiesel capability	Up to B20 ⁽¹⁾	

- Meets Brazil MAR-1 emission standards, equivalent to U.S. EPA Tier 3 and EU Stage IIIA.
- Recommended for use up to 4500 m (14,764 ft) altitude with engine power derate above 3000 m (9,842.5 ft).
- Advertised power is tested per the specified standard in effect at the time of manufacture.
- Net power advertised is the power available at the flywheel when the engine is equipped with fan, air intake system, exhaust system and alternator.
- Engine speed at 2,000 rpm.

⁽¹⁾Cat engines are compatible with diesel fuel blended with the following lower-carbon intensity fuels** up to:

- ✓ 100% 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.

*For use of blends higher than 20% biodiesel, consult your Cat dealer.

**Tailpipe greenhouse gas emissions from lower-carbon intensity fuels are essentially the same as traditional fuels.

Swing Mechanism

Swing Speed	11.3 rpm	
Maximum Swing Torque	74.4 kN·m	54,900 lbf-ft

Weights

Operating Weight	20 400 kg	45,000 lb
• Medium undercarriage, Reach boom, R2.9 (9'6") stick, General Duty (GD) 1.0 m ³ (1.31 yd ³) bucket, 600 mm (24") triple grouser shoes, 3700 kg (8,200 lb) counterweight.		

Track

Standard Track Shoes Width	600 mm	24 in
Number of Shoes (each side) – Medium Undercarriage	47	
Number of Track Rollers (each side)	7	
Number of Carrier Rollers (each side)	2	

Drive

Gradeability	35°/70%	
Maximum Travel Speed	5.7 km/h	3.5 mph
Maximum Drawbar Pull	206 kN	46,311 lbf

Hydraulic System

Main System – Maximum Flow – Implement	429 L/min (215 × 2 pumps)	113 gal/min (57 × 2 pumps)
Maximum Pressure – Equipment	35 000 kPa	5,075 psi
Maximum Pressure – Travel	34 300 kPa	4,974 psi
Maximum Pressure – Swing	25 000 kPa	3,625 psi
Boom Cylinder – Bore	120 mm	5 in
Boom Cylinder – Stroke	1260 mm	50 in
Stick Cylinder – Bore	135 mm	5 in
Stick Cylinder – Stroke	1504 mm	59 in
Bucket Cylinder – Bore	115 mm	5 in
Bucket Cylinder – Stroke	1104 mm	43 in

Service Refill Capacities

Fuel Tank Capacity	345 L	86.6 gal
Cooling System	25 L	6.6 gal
Engine Oil	15 L	4.0 gal
Swing Drive (each)	12 L	3.2 gal
Final Drive (each)	4 L	1.1 gal
Hydraulic System (including tank)	234 L	61.8 gal
Hydraulic Tank	115 L	30.4 gal

Standards

Brakes	ISO 10265: 2008
Cab/Rollover Protective Structure (ROPS)	ISO 12117-2: 2008
Falling Object Guard System (FOGS) (optional)	ISO 10262:1998 Level II

Sound Performance

ISO 6395:2008 (external)	99 dB(A)
ISO 6396:2008 (inside cab)	70 dB(A)

- 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.

320 GC Hydraulic Excavator Specifications

Operating Weight and Ground Pressure

Base Machine Configurations	600 mm (24") Triple Grouser Shoes	
	Weight	Ground Pressure
Base Frame with Track Rollers and Carrier Rollers		
3700 kg (8,200 lb) Counterweight + Medium Undercarriage Base Machine		
Reach Boom + R2.9 (9'6") Stick + 1.0 m ³ (1.31 yd ³) GD Bucket	20 400 kg (45,000 lb)	44.7 kPa (6.5 kPa)

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

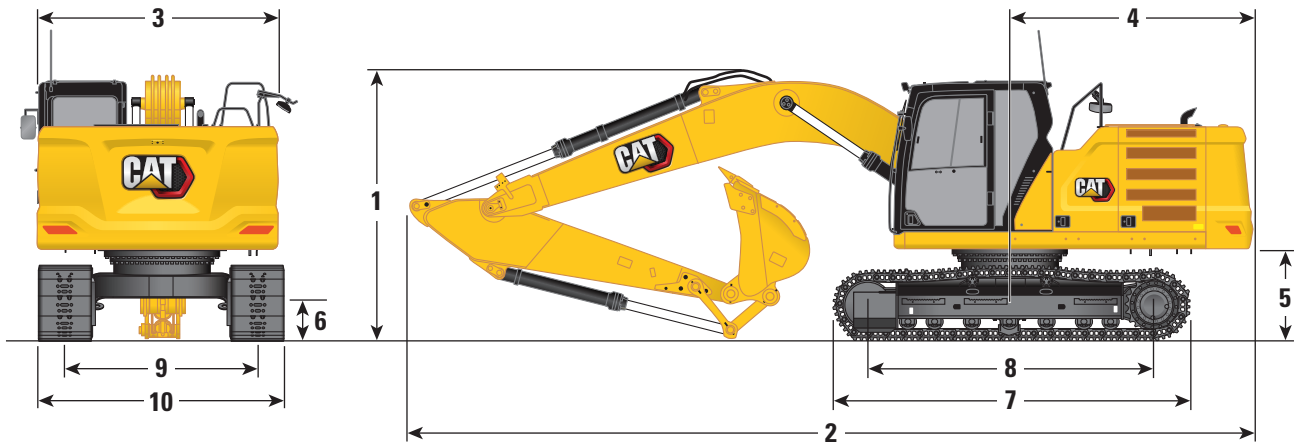
Major Component Weights

	kg	lb
Base Machine (with 3700 kg [8,200 lb] counterweight, standard swing frame, standard base frame with track rollers and standard carrier rollers for medium undercarriage, without boom cylinder – does not include 90% fuel and 75 kg [165 lb] operator)	13 740	30,300
Track Shoes:		
600 mm (24") Width, 8.5 mm (0.33") Thick, Triple Grouser Track Shoes	2500	5,500
Two Boom Cylinders	340	750
Weight of 90% Fuel Tank and 75 kg (165 lb) Operator	310	680
Counterweight:		
3700 kg Counterweight	3700	8,200
Swing Frame:		
Standard Swing Frame	1910	4,150
Undercarriage:		
Standard Base Frame with HD Track Rollers and Standard Carrier Rollers	4140	9,100
Boom (including lines, pins, stick cylinder):		
Reach Boom (5.7 m/18'8")	1690	3,700
Stick (including lines, pins, bucket cylinder, bucket linkage):		
Reach Stick (R2.9B1/9'6")	1080	2,400
Buckets (without linkage):		
1.0 m ³ (1.31 yd ³) GD	730	1,670
1.0 m ³ (1.31 yd ³) Heavy Duty (HD)	860	1,870

320 GC Hydraulic Excavator Specifications

Dimensions

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



Boom Option

Reach Boom
5.7 m (18'8")

Stick Option

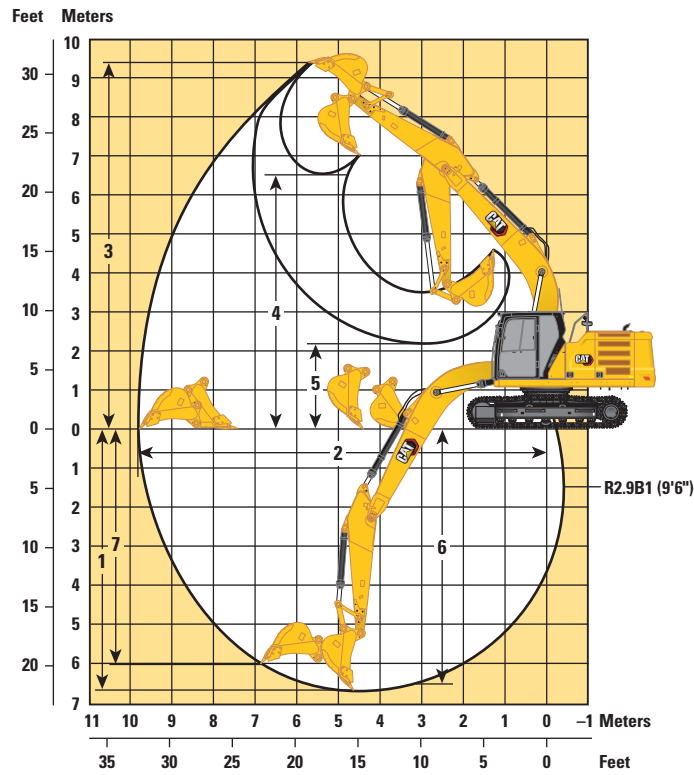
Reach Stick
R2.9B1 (9'6")

1 Machine Height:		
Top of Cab Height	2960 mm	9'9"
Top of FOGS Height	3100 mm	10'2"
Handrail Height	2950 mm	9'8"
With Boom/Stick/Bucket Installed	3160 mm	10'4"
With Boom/Stick Installed	2910 mm	9'7"
With Boom Installed	2480 mm	8'2"
2 Machine Length:		
With Boom/Stick/Bucket Installed	9530 mm	31'3"
With Boom/Stick Installed	9500 mm	31'2"
With Boom Installed	8450 mm	27'9"
3 Upperframe Width	2780 mm	9'1"
4 Tail Swing Radius	2830 mm	9'3"
5 Counterweight Clearance	1050 mm	3'5"
6 Ground Clearance	470 mm	1'7"
7 Track Length	4250 mm	13'11"
8 Length to Center of Rollers	3450 mm	11'4"
9 Track Gauge	2380 mm	7'10"
10 Undercarriage Width:		
600 mm (24") Shoes	2980 mm	9'9"
Bucket Type		GD
Bucket Capacity	1.00 m ³	1.31 yd ³
Bucket Tip Radius	1560 mm	5'1"

320 GC Hydraulic Excavator Specifications

Working Ranges

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



Boom Option	Reach Boom 5.7 m (18'8")	
Stick Option	Reach Stick R2.9B1 (9'6")	
1 Maximum Digging Depth	6630 mm	21'9"
2 Maximum Reach at Ground Line	9770 mm	32'0"
3 Maximum Cutting Height	9440 mm	30'11"
4 Maximum Loading Height	6580 mm	21'7"
5 Minimum Loading Height	2260 mm	7'5"
6 Maximum Depth Cut for 2440 mm (8'0") Level Bottom	6460 mm	21'2"
7 Maximum Vertical Wall Digging Depth	6010 mm	19'8"
Bucket Digging Force (ISO)	129 kN	29,007 lbf
Stick Digging Force (ISO)	99 kN	22,301 lbf
Bucket Type	GD	
Bucket Capacity	1.0 m ³	1.31 yd ³
Bucket Tip Radius	1560 mm	5'1"

320 GC Hydraulic Excavator Specifications

Bucket Specifications and Compatibility

	Linkage	Width		Capacity		Weight		Fill %	Reach Boom R2.9 (9'6")
		mm	in	m ³	yd ³	kg	lb		
Pin-On (No Quick Coupler)									
Utility Duty	B	1150	46	0.90	1.18	725	1,599	100	●
	B	1250	50	1.00	1.31	758	1,672	100	●
General Duty Excavation	B	1150	46	0.90	1.18	758	1,671	100	●
	B	1250	50	1.00	1.31	792	1,747	100	⊙
	B	1400	56	1.14	1.49	858	1,891	100	⊖
Heavy Duty	B	1050	43	1.00	1.31	884	1,948	100	⊙
	B	1200	49	1.19	1.56	955	2,105	100	⊖
	B	1350	54	1.38	1.81	1018	2,244	100	○
Severe Duty	B	1100	43	1.00	1.31	965	2,128	90	●
	B	1250	49	1.19	1.56	1063	2,343	90	⊖
Maximum load with pin-on (payload + bucket)								kg	2764
								lb	6,094
	Linkage	Width		Capacity		Weight		Fill %	Reach Boom R2.9 (9'6")
		mm	in	m ³	yd ³	kg	lb		
With Cat Pin Grabber Coupler									
Utility Duty	B	1150	46	0.90	1.18	725	1,599	100	⊙
	B	1250	50	1.00	1.31	758	1,672	100	⊖
General Duty Excavation	B	1150	46	0.90	1.18	758	1,671	100	⊙
	B	1250	50	1.00	1.31	792	1,747	100	⊖
	B	1400	56	1.14	1.49	858	1,891	100	○
Heavy Duty	B	1050	43	1.00	1.31	884	1,948	100	⊖
	B	1200	49	1.19	1.56	955	2,105	100	○
	B	1350	54	1.38	1.81	1018	2,244	100	◇
Severe Duty	B	1100	43	1.00	1.31	965	2,128	90	⊖
	B	1250	49	1.19	1.56	1063	2,343	90	○
Maximum load with coupler (payload + bucket)								kg	2006
								lb	4,423

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.

Bucket weight with General Duty tips.

Maximum Material Density:

- 2100 kg/m³ (3,500 lb/yd³)
- ⊙ 1800 kg/m³ (3,000 lb/yd³)
- ⊖ 1500 kg/m³ (2,500 lb/yd³)
- 1200 kg/m³ (2,000 lb/yd³)
- ◇ 900 kg/m³ (1,500 lb/yd³)
- 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.

320 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
Stick Length		R2.9 (9'6")
Hydraulic Hammers	H120 GC	✓
	H120 GC S	✓
	H130 GC	✓
	H130 GC S	✓
Rotary Cutters	RC20	✓

320 GC Standard and Optional Equipment

Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
BOOM, STICKS AND LINKAGES			CAT TECHNOLOGY		
5.7 m (18'8") Reach boom	✓		VisionLink®	✓*	
2.9 m (9'6") Reach stick	✓		VisionLink Productivity		✓
Bucket linkage, B1-family with or without lifting eye	✓		Remote Flash	✓	
CAB			ELECTRICAL SYSTEM		
ROPS	✓		1,000 CCA maintenance-free batteries (×2)	✓	
High-resolution 203 mm (8") LCD touchscreen monitor	✓		Centralized electrical disconnect switch	✓	
Auto bi-level air conditioner	✓		Programmable time-delay LED working lights	✓	
Keyless push-to-start engine control	✓		LED chassis light and Left Hand (LH) boom light	✓	
Height-adjustable console, three steps with tool	✓		Right Hand (RH) boom light, cab lights		✓
Fixed left-side console	✓		ENGINE		
Mechanical-suspension seat	✓		Cat C4.4 single turbo diesel engine	✓	
51 mm (2") seat belt	✓		Two selectable power modes	✓	
Console mounted Bluetooth® radio with USB ports	✓		Automatic engine speed control	✓	
24V DC outlet	✓		Auto engine idle shutdown	✓	
Document storage	✓		Work up to 3000 m (9,842.5 ft) above sea level without engine power de-rating	✓	
Overhead storage and rear storage with nets	✓		52° C (125° F) high-ambient cooling capacity	✓	
Beverage holder	✓		Cold starting capability for -32° C (-25° F)	✓	
Cup holder	✓		Double element air filter with integrated pre-cleaner	✓	
Openable two-piece front window	✓		Electric fuel priming pump	✓	
Rear window emergency exit	✓		Electric cooling fans with auto-reverse function	✓	
Radial wiper with washer	✓				
Openable steel hatch	✓				
LED dome light	✓				
Roller front sunscreen	✓				
Roller rear sunscreen		✓			
Washable floor mat	✓				
Beacon ready	✓				

(continued on next page)

*Connect subscription only. Additional subscriptions are available. Contact your Cat dealer for availability.

Standard and Optional Equipment *(continued)*

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

	Standard	Optional		Standard	Optional
HYDRAULIC SYSTEM			SERVICE AND MAINTENANCE		
Boom and stick regeneration circuits	✓		Scheduled Oil Sampling (S·O·S SM) ports	✓	
Electronic main control valve	✓		Grouped location for engine oil and fuel filters	✓	
Auto warm up	✓		Ground-level second dipstick for engine oil	✓	
Auto two-speed travel	✓		Side entry to service platform	✓	
Boom and stick drift reduction valve	✓		Integrated vehicle health management system		✓
Element type main hydraulic filter	✓		UNDERCARRIAGE AND STRUCTURES		
Three button joysticks	✓		600 mm (24") triple grouser track shoes	✓	
Slider joysticks		✓	Medium undercarriage	✓	
Tandem type electronic main pump	✓		Tie-down points on base frame	✓	
Hammer return filter circuit		✓	Bottom guards	✓	
Tool Control (two pump, one/two way high-pressure flow)		✓	Swivel guard		✓
Basic Tool Control (one pump, one way high-pressure flow)		✓	Travel motor guards	✓	
Quick coupler circuit for Cat pin grabber		✓	Grease lubricated track links	✓	
Operating pattern film (four way)	✓		Center track guiding guards	✓	
SAFETY AND SECURITY			3700 kg (8,200 lb) counterweight	✓	
Auto hammer stop	✓				
Rearview camera and side RH mirror	✓				
Right-hand-sideview camera		✓			
Neutral lever (lock out) for all controls	✓				
Anti-skid plate and countersunk bolts on service platform	✓				
Ground-level accessible secondary engine shutoff switch in cab	✓				
Lockable disconnect switch	✓				
RH handrail and handhold (ISO 2867:2011 compliant)	✓				
Travel alarm	✓				
Swing alarm		✓			
Inspection light		✓			

Dealer Installed Kit and Attachments

Attachments may vary. Consult your Cat dealer for details.

CAB

- Lower radial wiper
- Rain protector plus cab light cover
- Polycarbonate roof hatch
- Sun visor, slider
- Laminated P5A glass front windshield
- LH/RH electrical pedal for tool control
- Armrest kit
- Dual exit rear window kit
- 75 mm (3") retractable seat belt
- Lunch box net
- Rear storage
- Tool box

GUARDS

- Swivel guard
- Side rubber bumper guard
- Falling object guard system
- Mesh guard full front
- Mesh guard half front
- Full protecting vandalism guard

MAINTENANCE

- Duct ready kit

SAFETY AND SECURITY

- Bluetooth receiver

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, please visit <https://www.caterpillar.com/en/company/sustainability>.

Engine

- The Cat® C4.4 engine meets Brazil MAR-1 emission standards, equivalent to U.S. EPA Tier 3 and EU Stage IIIA.
- Cat engines are compatible with diesel fuel blended with the following lower-carbon intensity fuels** up to:
 - ✓ 100% 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.

**For use of blends higher than 20% biodiesel, consult your Cat dealer.*

***Tailpipe greenhouse gas emissions from lower-carbon intensity fuels are essentially the same as traditional fuels.*

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

ISO 6395:2008 (external) – 99 dB(A)

ISO 6396:2008 (inside cab) – 70 dB(A)

- 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
 - Smart mode matches machine power to digging requirements automatically
 - Eco mode minimizes fuel consumption for light applications
 - Cut maintenance costs up to 20% with extended service intervals
 - Programmable high-efficiency cooling fans run only when needed
 - The latest hydraulic oil 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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AEXQ2198-09 (09-2023)
Replaces AEXQ2198-08
Build Number: 07G
(Hong Kong, Taiwan)

