



# 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	
Engine Power (ISO 9249)	107 kW	143 hp
Engine Power (ISO 14396)	108 kW	145 hp
Bore	105 mm	4 in
Stroke	127 mm	5 in
Displacement	4.4 L	269 in <sup>3</sup>

- The 320 GC meets China Nonroad Stage III emission standards.
- Recommended for use up to 4500 m (14,764 ft) altitude with engine power derate above 3000 m (9,842.5 ft).
- Rating at 2,000 rpm.

## Swing Mechanism

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

## Weights

Operating Weight	19 800 kg	43,700 lb
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- Reach boom, R2.9 (9'6") stick, GD 1.0 m<sup>3</sup> (1.31 yd<sup>3</sup>) bucket and 600 mm (24") triple grouser shoes, 3.7 mt (8,200 lb) counterweight.

## Track

Standard Track Shoes Width	600 mm	24 in
Number of Shoes (each side)	45	
Number of Track Rollers (each side)	7	
Number of Carrier Rollers (each side)	2	

## Drive

Maximum 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/ROPS	ISO 12117-2: 2008
Cab	ISO 10262-1: 1998
FOGS (optional)	ISO 10262-2: 1998

## 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

	600 mm (24") Triple Grouser Shoes			
	Weight		Ground Pressure	
<b>3.7 mt (8,200 lb) Counterweight Base Machine</b>				
Reach Boom + R2.9 (9'6") Stick + 1.0 m <sup>3</sup> (1.31 yd <sup>3</sup> ) GD Bucket	19 800 kg	43,700 lb	45.6 kPa	6.6 psi

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

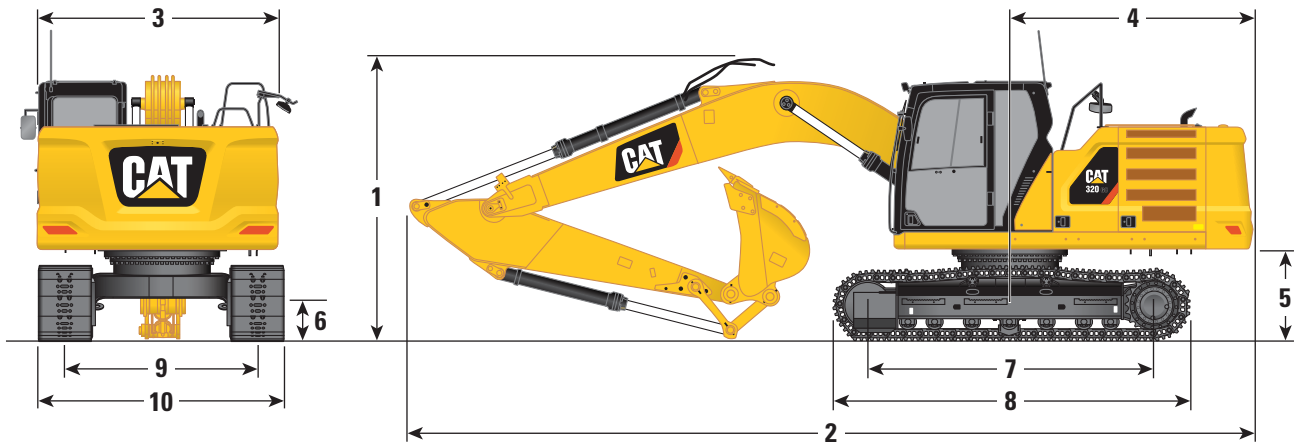
## Major Component Weights

	kg	lb
Base Machine (with 3.7 mt [8,200 lb] counterweight, standard swing frame, standard base frame with standard track rollers and standard carrier rollers for standard undercarriage, without boom cylinders – does not include 90% fuel and 75 kg [165 lb] operator)	13 200	29,100
Track Shoes:		
600 mm (24") Width, 8.5 mm (0.33") Thick Triple Grouser Track Shoes for Standard Undercarriage	2580	5,700
Two Boom Cylinders	340	750
Weight of 90% Fuel Tank and 75 kg (165 lb) Operator	310	680
Counterweight:		
3.7 mt (8,200 lb) Counterweight	3700	8,200
Swing Frame:		
Standard Swing Frame	1880	4,150
Standard Undercarriage without Track Shoes:		
Standard Base Frame with Standard Track Rollers and Standard Carrier Rollers for Standard Undercarriage	4030	8,900
Booms (including lines, pins, stick cylinder):		
Reach Boom (5.7 m/18'8")	1690	3,700
Sticks (including lines, pins, bucket cylinder, bucket linkage):		
Reach Stick (R2.9B1/9'6")	980	2,200
Buckets (without linkage):		
1.0 m <sup>3</sup> (1.31 yd <sup>3</sup> ) GD	730	1,600

# 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

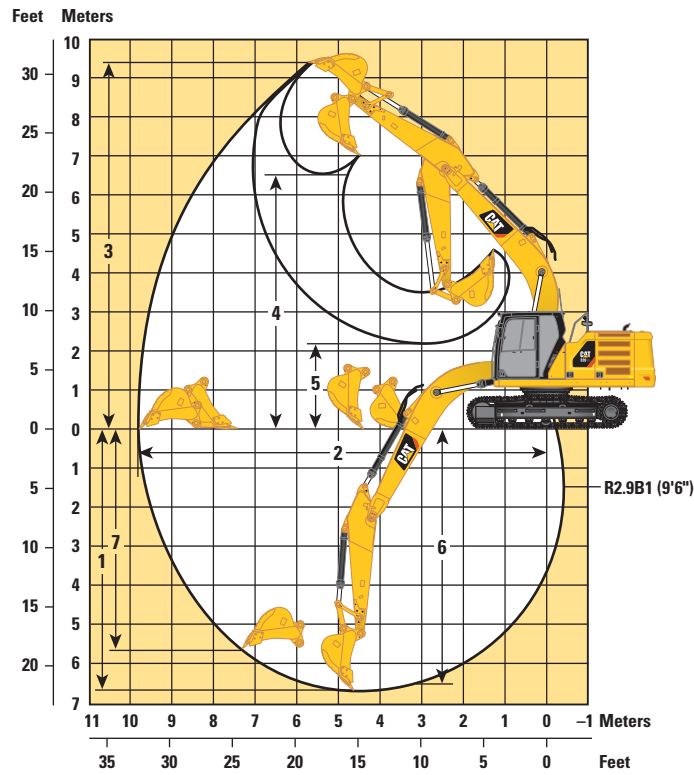
Reach Stick  
R2.9B1 (9'6")

<b>1</b> Machine Height:		
Top of Cab Height	2960 mm	9'9"
Top of FOGS Height	3100 mm	10'2"
Handrails 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"
<b>2</b> 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"
<b>3</b> Upperframe Width without Walkways	2780 mm	9'1"
<b>4</b> Tail Swing Radius	2830 mm	9'3"
<b>5</b> Counterweight Clearance	1050 mm	3'5"
<b>6</b> Ground Clearance	470 mm	1'7"
<b>7</b> Length to Center of Rollers	3270 mm	10'9"
<b>8</b> Track Length	4070 mm	13'4"
<b>9</b> Track Gauge – Extended	2200 mm	7'3"
Track Width:		
600 mm (24") Shoes	600 mm	24"
<b>10</b> Undercarriage Width (with steps/without steps):		
600 mm (24") Shoes	2800 mm	9'2"
Bucket Type		GD
Bucket Capacity	1.0 m <sup>3</sup>	1.31 yd <sup>3</sup>
Bucket Tip Radius	1580 mm	5'2"

# 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	6710 mm	22'0"
2 Maximum Reach at Ground Line	9850 mm	32'4"
3 Maximum Cutting Height	9450 mm	31'0"
4 Maximum Loading Height	6500 mm	21'4"
5 Minimum Loading Height	2180 mm	7'2"
6 Maximum Depth Cut for 2440 mm (8'0") Level Bottom	6540 mm	21'5"
7 Maximum Vertical Wall Digging Depth	5690 mm	18'8"
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 <sup>3</sup>	1.31 yd <sup>3</sup>
Bucket Tip Radius	1560 mm	5'1"

# 320 GC Hydraulic Excavator Specifications

## Bucket Specifications and Compatibility

	Linkage	Width		Capacity		Weight		Fill	3.7 mt (8,200 lb) Counterweight
		mm	in	m <sup>3</sup>	yd <sup>3</sup>	kg	lb		%
<b>Pin-On (No Quick Coupler)</b>									
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	X
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	X
Severe Duty	B	1100	43	1.00	1.31	965	2,128	90	⊖
	B	1250	49	1.19	1.56	1063	2,343	90	○
General Duty	312	900	36	0.53	0.69	403	888	100	
Ditch Cleaning	312	1200	48	0.57	0.74	386	851	100	
Maximum load with pin-on (payload + bucket)								kg	2425
								lb	5,346
	Linkage	Width		Capacity		Weight		Fill	3.7 mt (8,200 lb) Counterweight
		mm	in	m <sup>3</sup>	yd <sup>3</sup>	kg	lb		%
<b>With Cat Pin Grabber Coupler</b>									
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	X
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 7451:2007.

Bucket weight with General Duty tips.

### Maximum Material Density:

- ⊙ 1800 kg/m<sup>3</sup> (3,000 lb/yd<sup>3</sup>)
- ⊖ 1500 kg/m<sup>3</sup> (2,500 lb/yd<sup>3</sup>)
- 1200 kg/m<sup>3</sup> (2,000 lb/yd<sup>3</sup>)
- ◇ 900 kg/m<sup>3</sup> (1,500 lb/yd<sup>3</sup>)
- 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 – China

### PIN-ON ATTACHMENTS

Counterweight		3.7 mt (8,200 lb)	
Boom Type		Reach Boom	
Stick Length		2.5 m (8'2")	2.9 m (9'7")
Hydraulic Hammers	H115E S	✓	✓
	H120 GC	✓	✓
	H120 GC Side-mount	✓	✓
	H120 GC S	✓	✓
	H120E S	✓	✓
	H130E S	✓	✓†
Compactors (Vibratory Plate)	CVP110	✓	✓
Cat Pin Grabber Couplers		✓	✓

### CAT PIN GRABBER COUPLER ATTACHMENTS

Counterweight		3.7 mt (8,200 lb)	
Boom Type		Reach Boom	
Stick Length		2.5 m (8'2")	2.9 m (9'7")
Hydraulic Hammers	H115E S	✓†	✓†
	H120 GC	✓†	✓†*
	H120 GC Side-mount	✓†	✓†
	H120 GC S	✓†	✓†
	H120E S	✓†	✓†
	H130E S	✓†	✓†*
Compactors (Vibratory Plate)	CVP110	✓	✓

\*Working range front only.

†Allowed usage on machine less than 50%.

## Attachments Offering Guide – Hong Kong, Taiwan

### PIN-ON ATTACHMENTS

Counterweight		3.7 mt (8,200 lb)	
Boom Type		Reach Boom	
Stick Length		2.5 m (8'2")	2.9 m (9'7")
Hydraulic Hammers	H120 GC	✓	✓
	H120 GC S	✓	✓

# 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
<b>CAB</b>			<b>ENGINE</b>		
ROPS, standard sound suppression	✓		Cat C4.4 single turbo China Nonroad Stage III	✓	
High-resolution 203 mm (8") LCD touchscreen monitor	✓		Two selectable power modes	✓	
Automatic bi-level air conditioner	✓		One-touch low idle with automatic engine speed control	✓	
Jog dial and shortcut keys for monitor control	✓		Automatic engine idle shutdown	✓	
Keyless push-to-start engine control	✓		Work up to 3000 m (9,842.5 ft) above sea level without engine power de-rating	✓	
Height-adjustable console, three steps with tool	✓		52° C (125° F) high-ambient cooling capacity	✓	
Fixed left-side console	✓		Cold starting capability for -32° C (-25° F)	✓	
Mechanically adjustable seat suspension	✓		Double element air filter with integrated precleaner	✓	
51 mm (2") orange seat belt	✓		Electric fuel priming pump	✓	
Bluetooth® integrated radio (no USB, aux port or microphone)	✓		On-demand electric cooling fans with auto-reverse function	✓	
12V DC outlets	✓		Biodiesel capability up to B20	✓	
Document storage	✓		<b>HYDRAULIC SYSTEM</b>		
Cup and bottle holders	✓		Boom and stick regeneration circuits	✓	
Openable two-piece front window	✓		Electronic main control valve	✓	
Upper radial wiper with washer	✓		Auto hydraulic oil warm up	✓	
Openable steel hatch	✓		Automatic two-speed travel	✓	
LED dome light	✓		Boom and stick drift reduction valve	✓	
Roller front sunscreen	✓		Element type main hydraulic filter	✓	
Roller rear sunscreen		✓	Three button joysticks	✓	
Rear window emergency exit	✓		Slider joysticks		✓*
Washable floor mat	✓		Tandem type electronic main pump	✓	
Beacon ready	✓		Hammer return filter circuit		✓*
			Tool Control (two pump, one/two way high-pressure flow)		✓*
			Basic Tool Control (one pump, one way high-pressure flow)		✓
			Quick coupler circuit for Cat Pin Grabber		✓*
			Operating pattern film (four way)	✓*	

\*Hong Kong and Taiwan only

(continued on next page)



# 320 GC Standard and Optional Equipment

## Standard and Optional Equipment *(continued)*

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

	Standard	Optional		Standard	Optional
<b>UNDERCARRIAGE AND STRUCTURES</b>			<b>CAT TECHNOLOGY</b>		
Tie-down points on base frame	✓		Cat Product Link™	✓	
Standard bottom guards	✓		Auto hammer stop	✓	
Standard travel motor guards	✓		<b>SERVICE AND MAINTENANCE</b>		
Grease lubricated track links	✓		Sampling ports for Scheduled Oil Sampling (S·O·S <sup>SM</sup> )	✓	
Center track guiding guard	✓		Grouped location for engine oil and fuel filters	✓	
3.7 mt (8,200 lb) counterweight	✓		Ground level second dipstick for engine oil	✓	
Standard swing frame	✓		Side entry to service platform	✓	
Standard swing bearing	✓		<b>SAFETY AND SECURITY</b>		
Base frame with standard track rollers and standard carrier rollers	✓		Rearview camera and side RH mirror	✓	
Final drive with standard travel motor	✓		Right-side-view camera		✓
<b>BOOM, STICKS AND LINKAGES</b>			Neutral lever (lock out) for all controls	✓	
600 mm (24") triple grouser track shoes	✓		Anti-skid plate and countersunk bolts on service platform	✓	
5.7 m (18'8") Reach boom	✓		Ground-level accessible secondary engine shutoff switch in cab	✓	
2.9 m (9'6") Reach stick	✓		RH handrail and hand hold (ISO 2867:2011 compliant)	✓	
Bucket linkage, B1-family with or without lifting eye	✓		Travel alarm	✓*	
<b>ELECTRICAL SYSTEM</b>			*Hong Kong and Taiwan only		
Machine electronic control module (×2)	✓				
1,000 CCA maintenance-free batteries (×2)	✓				
Centralized electrical disconnect switch	✓				
Programmable time-delay LED working lights	✓				
LED chassis light and LH boom light	✓				
RH boom light, cab lights		✓			

# 320 GC Attachments

## Dealer Installed Kit and Attachments

Attachments may vary. Consult your Cat dealer for details.

### CAB

- RH electrical pedal (Hong Kong, Taiwan)
- Polycarbonate roof hatch

### SAFETY AND SECURITY

- Bluetooth receiver kit (Hong Kong, Taiwan)

### GUARDS

- FOGS (not compatible with cab light cover, rain protector)
- Mesh guard full front (not compatible with cab light cover, rain protector)
- Mesh guard lower half front
- Full protecting vandalism guard
- Standard swivel guard

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at [www.cat.com](http://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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Replaces AEXQ2198-03  
Build Number: 07C  
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