



320 GX

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
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
320 GX Environmental Declaration	11

320 GX Hydraulic Excavator Specifications

Engine

Engine Model	Cat® C4.4	
Net Power		
ISO 9249	105.6 kW	142 hp
ISO 9249 (DIN)	144 hp (metric)	
Engine Power		
ISO 14396	110 kW	148 hp
ISO 14396 (DIN)	150 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⁾	

- The 320 GX meets China Nonroad Stage IV emission standards.
- Recommended for use up to 4500 m (14,764 ft) altitude with engine power derate above 3000 m (9,842 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 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 (hydrotreated 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 (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	11.07 rpm	
Maximum Swing Torque	74 kN·m	54,875 lbf·ft

Weights

Operating Weight	19 800 kg	43,650 lb
------------------	-----------	-----------

- Standard undercarriage, Reach boom, R2.7 (8'10") stick, General Duty (GD) 0.93 m³ (1.22 yd³) bucket, 600 mm (24") triple grouser shoes, and 3600 kg (7,940 lb) counterweight.

Track

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	3.6 mph
Maximum Drawbar Pull	201 kN	45,142 lbf

Hydraulic System

Main System – Maximum Flow – Implement	429 L/min (214.5 L/min × 2 pumps)	113.4 gal/min (56.7 gal/min × 2 pumps)
Maximum Pressure – Equipment – Normal	35 000 kPa	5,075 psi
Maximum Pressure – Travel	35 000 kPa	5,075 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

320 GX Hydraulic Excavator Specifications

Service Refill Capacities

Fuel Tank Capacity	390 L	103.0 gal
Cooling System	24.5 L	6.5 gal
Engine Oil	15 L	4.0 gal
Swing Drive	5.5 L	1.5 gal
Final Drive (each)	4.5 L	1.2 gal
Hydraulic System (including tank)	218 L	57.6 gal
Hydraulic Tank	115 L	30.4 gal

Standards

Brakes	ISO 10265:2008
Cab/Operator Protective Guards (OPG) (Optional)	ISO 10262:1998 Level II

Sound Performance

GB/T 25614-2010 (external)	104 dB(A)
GB/T 25615-2010 (inside cab)	80 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 GX Hydraulic Excavator Specifications

Operating Weights and Ground Pressures

	600 mm (24") Triple Grouser Shoes	
	Weight	Ground Pressure
	kg (lb)	kPa (psi)
Base Frame with Track Rollers and Carrier Rollers		
3600 kg (7,940 lb) Counterweight + Standard Undercarriage Base Machine		
Reach Boom + R2.7B1 (8'9") Stick + 0.93 m ³ (1.22 yd ³) GD Bucket	19 800 (43,650)	45.6 (6.6)

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

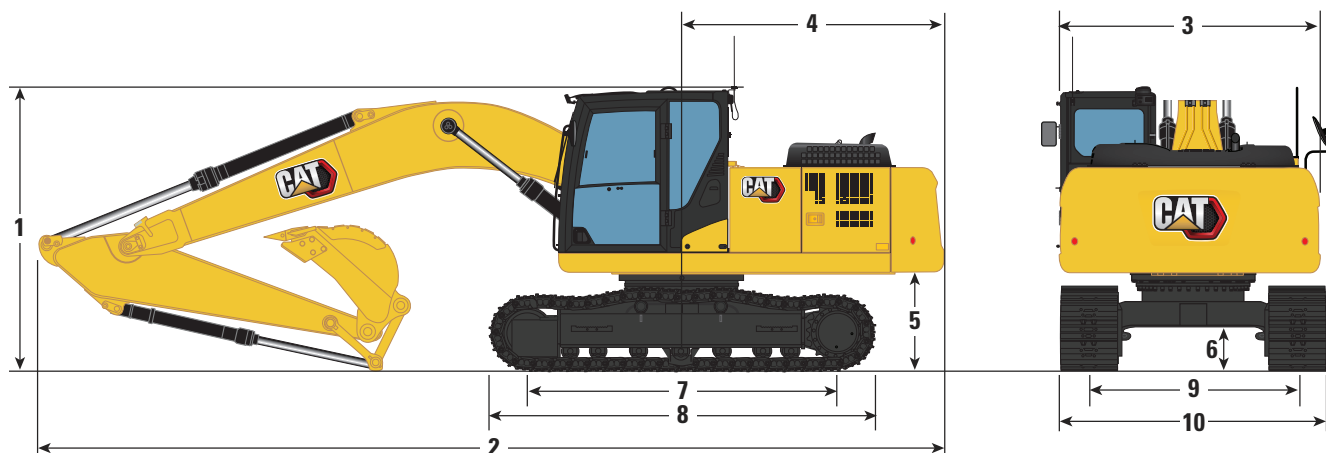
Major Component Weights

	kg	lb
Base Machine (with upper frame, standard undercarriage, counterweight and two boom cylinders – does not include boom, stick, bucket, stick cylinder, bucket cylinder, tracks, 90% fuel tank and 75 kg [165 lb] operator).	13 570	29,910
Track Shoes:		
600 mm (24") Width, 8.5 mm (0.33") Thick Triple Grouser Track Shoes	2390	5,270
Two Boom Cylinders	360	800
Weight of 90% Fuel Tank and 75 kg (165 lb) Operator	380	840
Counterweight:		
3600 kg (7,940 lb) Counterweight	3600	7,930
Boom (including lines, pins, stick cylinder):		
Reach Boom 5.7 m (18'8")	1650	3,640
Stick (including lines, pins, bucket cylinder, bucket linkage):		
Reach Stick R2.7B1 (8'9")	1030	2,260
Buckets (without linkage, with tips and side cutters):		
0.90 m ³ (1.18 yd ³) Utility Duty (UD)	750	1,650
0.93 m ³ (1.22 yd ³) GD	770	1,690
1.00 m ³ (1.31 yd ³) GD	790	1,750

320 GX 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
R2.7B1 (8'9")

1 Machine Height

Top of Cab Height	2950 mm	9'8"
Top of OPG Height	3080 mm	10'1"
Handrail Height	3010 mm	9'11"
With Boom/Stick/Bucket Installed	3130 mm	10'3"
With Boom/Stick Installed	3010 mm	9'11"
With Boom Installed	3010 mm	9'11"

2 Machine Length

With Boom/Stick/Bucket Installed	9570 mm	31'5"
With Boom/Stick Installed	9560 mm	31'4"
With Boom Installed	8510 mm	27'11"

3 Upperframe Width

2740 mm	9'0"
---------	------

4 Tail Swing Radius

2830 mm	9'3"
---------	------

5 Counterweight Clearance

1040 mm	3'5"
---------	------

6 Ground Clearance

460 mm	1'6"
--------	------

7 Track Length - Length to Center of Rollers

3270 mm	10'9"
---------	-------

8 Track Length - Crawler Overall Length

4080 mm	13'5"
---------	-------

9 Track Gauge

2200 mm	7'3"
---------	------

10 Undercarriage Width - 600 mm (24") Shoes

2800 mm	9'2"
---------	------

Bucket Type

GD	GD
----	----

Bucket Capacity

0.93 m ³	1.22 yd ³
---------------------	----------------------

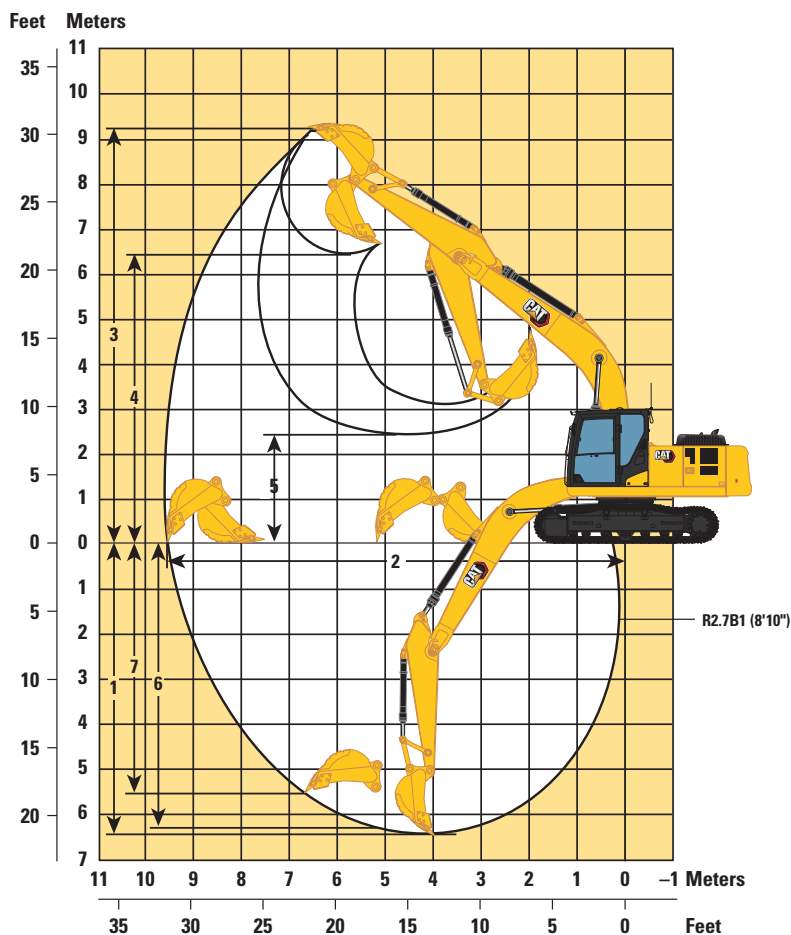
Bucket Tip Radius

1495 mm	4'11"
---------	-------

320 GX Hydraulic Excavator Specifications

Working Ranges and Forces

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



Boom Option

Reach Boom
5.7 m (18'8")

Stick Option

Reach Stick
R2.7B1 (8'9")

1 Maximum Digging Depth	6430 mm	21'1"
2 Maximum Reach at Ground Level	9580 mm	31'5"
3 Maximum Cutting Height	9290 mm	30'6"
4 Maximum Loading Height	6450 mm	21'2"
5 Minimum Loading Height	2460 mm	8'1"
6 Maximum Depth Cut for 2440 mm (8 ft) Level Bottom	6250 mm	20'6"
7 Maximum Vertical Wall Digging Depth	5510 mm	18'1"
Minimum Working Equipment Radius	3680 mm	12'1"
Bucket Digging Force (ISO)	136 kN	30,597 lbf
Stick Digging Force (ISO)	106 kN	23,897 lbf
Bucket Type	GD	GD
Bucket Capacity	0.93 m ³	1.22 yd ³
Bucket Tip Radius	1495 mm	4'11"

320 GX Hydraulic Excavator Specifications

Bucket Specifications and Compatibility

	Linkage	Width		Capacity		Weight		Fill	Reach Boom
		mm	in	m³	yd³	kg	lb	%	R2.7 m (8'10")
Pin-On (No Quick Coupler)									
General Duty	B	1200	47	0.93	1.22	766	1,689	100	●
	B	1200	42	1.00	1.31	784	1,729	100	◎
Utility Duty	B	1150	46	0.90	1.18	750	1,653	100	●
Max load pin-on (payload + bucket)								kg	2580
								lb	5,688

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:

● 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.

320 GX 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
- ☐ † Allowed usage on machine less than 50%

PIN-ON ATTACHMENTS

Boom Type		Reach
Stick Size		R2.7 m (8'9")
Hydraulic Hammers	H115 S	✓
	H120 GC	✓
	H120 GC Side-Mount	✓
	H120 GC S	✓
	H120 S	✓
	H130 S	✓†
	H140 Side-Mount	✓
Compactors (Vibratory Plate)	CVP110	✓

320 GX Standard and Optional Equipment

Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
BOOMS, STICKS AND LINKAGES			ENGINE (continued)		
5.7 m (18'8") Reach boom	✓		Electric fuel priming pump	✓	
2.7 m (8'9") Reach stick	✓		Direct drive fan	✓	
Bucket linkage, B1 type	✓		Two-stage fuel filtration system with water separator and indicator	✓	
CAB			Sealed double element air filter with pre-cleaner	✓	
Sound suppressed cab with viscous mounts	✓		HYDRAULIC SYSTEM		
High-resolution 203 mm (8") LCD touchscreen monitor	✓		Electronic main control valve, hammer ready	✓	
Mechanically adjustable seat with headrest	✓		Tandem-type electronic pump	✓	
51 mm (2") seat belt	✓		High performance hydraulic return filter	✓	
Automatic bi-level air conditioner	✓		Hammer return filter		✓
Keyless push-to-start engine control	✓		Boom and stick regeneration circuits	✓	
Floor mounted adjustable consoles	✓		Automatic hydraulic oil warm-up	✓	
1-button joysticks	✓		Automatic two-speed travel	✓	
3-button joysticks		✓	Hammer lines		✓
AM/FM radio with Bluetooth®, USB and auxiliary port	✓		SAFETY AND SECURITY		
24V DC outlet	✓		Anti-skid plating with countersunk bolts	✓	
Cup holder and storage compartments	✓		OPG with matching lights		✓
70/30 tempered glass windshield	✓		Handrail and hand hold	✓	
Upper radial wiper with washer	✓		Lockable external tool/storage box	✓	
Openable steel hatch	✓		Ground-level secondary engine shutoff switch	✓	
Dome light	✓		Mirror package	✓	
Washable floor mat	✓		Lockable disconnect switch	✓	
ELECTRICAL SYSTEM			Signaling/warning horn	✓	
Two 950 CCA maintenance-free batteries	✓		Swing alarm		✓
Electrical disconnect switch	✓		Hydraulic lockout lever	✓	
LED chassis and cab lights	✓		Rearview camera		✓
LED Left-side boom light	✓		SERVICE AND MAINTENANCE		
LED Right-side boom light		✓	Grouped engine oil and fuel filters	✓	
ENGINE			Scheduled Oil Sampling (S-O-S SM) ports	✓	
Cat® C4.4 single turbo diesel engine	✓		Radiator screen		✓
Two selectable modes: Power, Smart	✓		UNDERCARRIAGE AND STRUCTURES		
Up to 4500 m (14,760 ft) altitude capability with derate from 3000 m (9,840 ft)	✓		600 mm (24") triple grouser shoes	✓	
52° C (125° F) high-ambient cooling capacity	✓		Grease lubricated track link	✓	
-25° C (-13° F) cold start capability	✓		Center track guiding guard	✓	
			Bottom guards	✓	
			Travel motor guards	✓	
			3600 kg (7,940 lb) counterweight	✓	
			Tie-down points	✓	

320 GX Hydraulic Excavator Specifications

Dealer Installed Kits and Attachments

Attachments may vary. Consult your Cat dealer for details.

GUARDS

- 6 mm (0.24") standard swivel guard
- Mesh guard full front (not compatible with cab light cover, rain protector)
- Mesh guard lower half front

SERVICE PARTS

- Hammer floor pedal kit
- Grease gun holder

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 320 GX meets the 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)*
 - ✓ 100% renewable diesel, HVO (hydrotreated 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 (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

GB/T 25614-2010 (external)	104 dB(A)
GB/T 25615-2010 (inside cab)	80 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.
 - Smart mode matches machine power to digging requirements automatically
 - Automatic Engine Control reduces engine speed when the machine is not under load to minimize fuel consumption
 - Cut maintenance costs up to 20% with enhanced filters and extended service intervals
 - The latest hydraulic oil filter provides longer life with a 3,000-hour replacement interval – 50% longer than previous filter designs

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

© 2023 Caterpillar
All rights reserved

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

CAT, CATERPILLAR, LET'S DO THE WORK, their respective logos, S-O-S, Product Link, "Caterpillar Corporate Yellow", the "Power Edge" and Cat "Modern Hex" trade dress as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission. VisionLink is a trademark of Caterpillar Inc., registered in the United States and in other countries.

AEXQ2988-06 (12-2023)
Replaces AEXQ2988-05
Build Number: 05E
(China)

