



320D3 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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320D3 GC Hydraulic Excavator Specifications

Engine

Engine Model	ALUW06DTI	
Net Power		
ISO 9249:2007	92 kW	123 hp
ISO 9249:2007 (DIN)	125 hp (metric)	
Engine Power		
ISO 14396:2002	100 kW	134 hp
ISO 14396:2002 (DIN)	136 hp (metric)	
Bore	104 mm	4 in
Stroke	113 mm	4 in
Displacement	5.76 L	351 in ³

- Noncertified emission engine.
- Recommended for use up to 4000 m (13,120 ft) altitude with engine power derate above 3000 m (9,840 ft).
- Net power is tested per ISO 9249. Standards 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 cleaner, muffler, and alternator.
- Engine speed at 1,700 rpm.

Swing Mechanism

Swing Speed	10.00 rpm	
Maximum Swing Torque	62 kN·m	45,581 lbf·ft

Weights

Operating Weight	19 800 kg	43,600 lb
• Standard undercarriage, 5.7 m (18'8") Reach boom, R2.25 (7'5") stick, 1.0 m ³ (1.31 yd ³) GD bucket, 600 mm (24") triple grouser shoes, and 3.7 mt (8,160 lb) counterweight.		
Operating Weight	20 000 kg	44,100 lb
• Standard undercarriage, 5.7 m (18'8") Reach boom, HD R2.5 (8'2") stick, 1.0 m ³ (1.31 yd ³) GD bucket, 600 mm (24") triple grouser shoes, and 3.7 mt (8,160 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	3.8 km/h	2.4 mph
Maximum Drawbar Pull	152 kN	34,171 lbf

Hydraulic System

Main System – Maximum Flow – Implement	400 L/min (200 × 2 pumps)	106 gal/min (53 × 2 pumps)
Maximum Pressure – Equipment – Implement	35 000 kPa	5,075 psi
Maximum Pressure – Travel	35 000 kPa	5,075 psi
Maximum Pressure – Swing	25 000 kPa	3,625 psi
Pilot System – Maximum Pressure	3900 kPa	566 psi
Boom Cylinder – Bore	125 mm	5 in
Boom Cylinder – Stroke	1260 mm	50 in
Stick Cylinder – Bore	130 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	350 L	92.5 gal
Cooling System	19 L	5 gal
Engine Oil (with filter)	18 L	4.8 gal
Swing Drive	6 L	1.6 gal
Final Drive (each)	5 L	1.3 gal
Hydraulic System (including tank)	230 L	60.8 gal
Hydraulic Tank	110 L	29.1 gal

Standards

Brakes	ISO 10265:2008
Cab/ROPS (optional)	ISO 12117-2:2008
Cab	ISO 10262:1998 Level I
FOGS (optional)	ISO 10262:1998 Level II

Sound Performance

ISO 6395:2008 (external)	102 dB(A)
ISO 6396:2008 (inside cab)	72 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.

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Operating Weights and Ground Pressures

Base Machine Configurations	600 mm (24") Wide, 8.5 mm (0.3") Thick Triple Grouser Shoes		600 mm (24") Wide, 10.0 mm (0.4") Thick HD Triple Grouser Shoes	
	Weight	Ground Pressure	Weight	Ground Pressure
Base Frame with Track Rollers and Carrier Rollers				
3.7 mt (8,160 lb) Counterweight + Standard Undercarriage Base Machine				
Reach Boom + R2.25 (7'5") Stick + 1.0 m ³ (1.31 yd ³) GD Bucket	19 700 kg 43,400 lb	45.3 kPa 6.6 psi	19 800 kg 43,600 lb	45.5 kPa 6.6 psi
Reach Boom + HD R2.5 (8'2") Stick + 1.0 m ³ (1.31 yd ³) GD Bucket	19 900 kg 43,900 lb	45.8 kPa 6.6 psi	20 000 kg 44,100 lb	46.0 kPa 6.7 psi

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

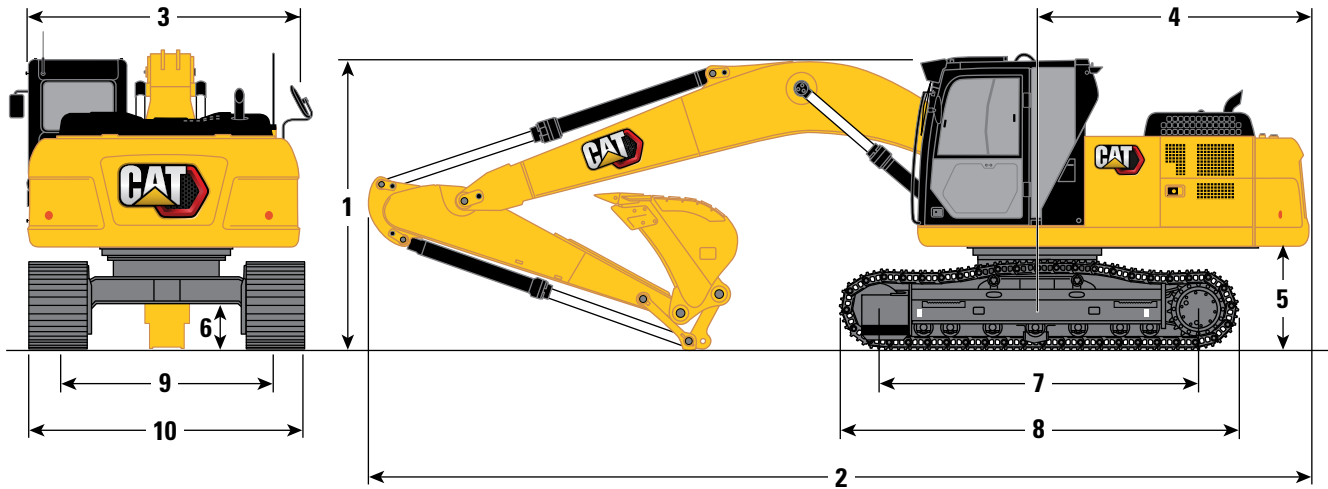
Major Component Weights

	kg	lb
Base machine with 3.7 mt (8,160 lb) counterweight, swing frame, base frame with track rollers and carrier rollers, two boom cylinders, pins, fluids and 75 kg (165 lb) operator	14 100	31,090
Track Shoes:		
600 mm (24") Width, 8.5 mm (0.3") Thick, Triple Grouser Track Shoes	2400	5,290
600 mm (24") Width, 10 mm (0.4") Thick, Triple Grouser Track Shoes	2480	5,470
Two Boom Cylinders	360	780
Weight of 90% Fuel Tank and 75 kg (165 lb) Operator	380	830
Counterweight:		
3.7 mt (8,160 lb) Counterweight	3700	8,160
Swing Frame:		
Standard Swing Frame	1700	3,750
Undercarriage:		
Base Frame with Standard Track Rollers and Carrier Rollers	3970	8,750
Boom (including lines, pins, stick cylinder):		
Reach Boom 5.7 m (18'8")	1520	3,350
Sticks (including lines, pins, bucket cylinder, bucket linkage):		
Reach Stick R2.25 (7'5")	880	1,930
HD Reach Stick R2.5 (8'2")	1080	2,380
Buckets (without linkage, with tips and side cutters):		
0.92 m ³ (1.20 yd ³) General Duty Bucket	790	1,740
1.0 m ³ (1.31 yd ³) General Duty Bucket	800	1,770

320D3 GC Hydraulic Excavator Specifications

Dimensions

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

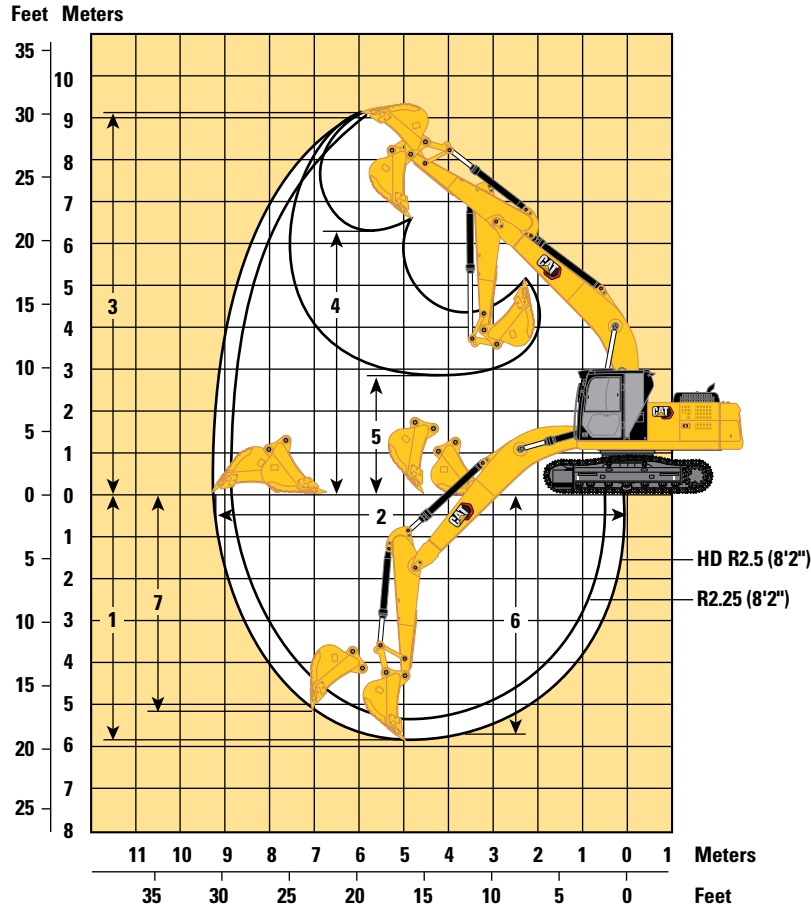


Boom Option	Reach Boom 5.7 m (18'8")			
	Stick Options		Reach Stick	
	R2.25 (7'5")		HD R2.5 (8'2")	
1 Machine Height:				
Cab Height (without shoe lug height)	2960 mm	9'8"	2950 mm	9'8"
Shipping Height (including shoe lug height)	3100 mm	10'4"	3050 mm	10'0"
Handrails Height	2915 mm	9'7"	2915 mm	9'7"
2 Machine Length with Boom/Stick/Bucket Installed	9520 mm	31'3"	9460 mm	31'0"
3 Upperframe Width without Walkways	2740 mm	9'0"	2740 mm	9'0"
4 Tail Swing Radius	2750 mm	9'0"	2750 mm	9'0"
5 Counterweight Clearance (without shoe lug height)	1020 mm	3'4"	1020 mm	3'4"
6 Ground Clearance (without shoe lug height)	450 mm	1'6"	450 mm	1'6"
7 Track Length to Center of Rollers – Length to Center of Rollers	3270 mm	10'9"	3270 mm	10'9"
8 Track Length	4080 mm	13'5"	4080 mm	13'5"
9 Track Gauge – Standard Undercarriage	2200 mm	7'3"	2200 mm	7'3"
10 Transportation Width – 600 mm (24") Shoes	2800 mm	9'2"	2800 mm	9'2"
Bucket Type	GD		GD	
Bucket Capacity	1.00 m ³	1.31 yd ³	1.00 m ³	1.31 yd ³
Bucket Tip Radius	1488 mm	4'11"	1488 mm	4'11"

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Working Ranges and Forces

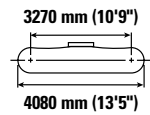
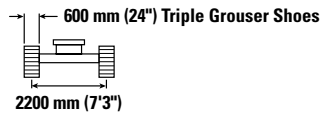
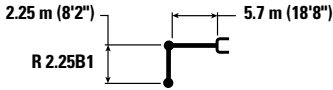
All dimensions are approximate and may vary depending on bucket selection.



Boom Option	Reach Boom 5.7 m (18'8")			
	Stick Options		Reach Stick	
	R2.25 (7'5")	HD R2.5 (8'2")	R2.25 (7'5")	HD R2.5 (8'2")
1 Maximum Digging Depth	5970 mm	19'7"	6300 mm	20'8"
2 Maximum Reach at Ground Line	9140 mm	30'0"	9470 mm	31'1"
3 Maximum Cutting Height	9110 mm	29'11"	9250 mm	30'4"
4 Maximum Loading Height	6250 mm	20'6"	6290 mm	20'8"
5 Minimum Loading Height	2920 mm	9'7"	2590 mm	8'6"
6 Maximum Depth Cut for 2440 mm (8 ft) Level Bottom	5640 mm	18'6"	5960 mm	19'7"
7 Maximum Vertical Wall Digging Depth	5350 mm	17'7"	5720 mm	18'4"
Bucket Digging Force (ISO)	134 kN	30,120 lbf	136 kN	30,570 lbf
Stick Digging Force (ISO)	112 kN	25,180 lbf	103 kN	23,250 lbf
Bucket Type	GD		GD	
Bucket Capacity	1.00 m ³	1.31 yd ³	1.00 m ³	1.31 yd ³
Bucket Tip Radius	1488 mm	4'11"	1488 mm	4'11"

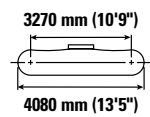
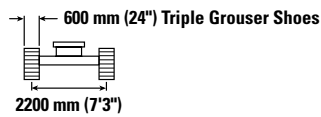
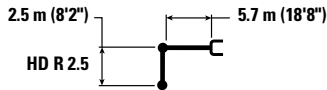
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Reach Boom Lift Capacities – Counterweight: 3.7 mt (8,160 lb) – without Bucket



Reach Boom	Unit	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
		kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	
7.5 m 25.0 ft	kg lb									*4400 *9,750	*4400 *9,750	5.25 17.22
6.0 m 20.0 ft	kg lb					*6200 *12,700	4400 9,400			*4000 *8,750	3800 8,450	6.55 21.48
4.5 m 15.0 ft	kg lb			*7850 *16,950	6550 14,150	6250 13,450	4250 9,150			*3900 *8,550	3150 6,900	7.32 24.01
3.0 m 10.0 ft	kg lb			9450 20,300	6100 13,150	6050 13,050	4100 8,800	4350 9,300	2950 6,350	*4000 *8,750	2800 6,200	7.72 25.33
1.5 m 5.0 ft	kg lb			9000 19,350	5750 12,350	5850 12,600	3900 8,400	4250 9,150	2900 6,200	4000 8,800	2700 5,950	7.82 25.66
0 m 0 ft	kg lb			8850 18,950	5600 12,000	5750 12,350	3800 8,150	4200	2850	4100 9,050	2750 6,100	7.62 25.00
-1.5 m -5.0 ft	kg lb	*10 050 *22,900	*10 500 22,650	8850 18,950	5600 12,000	5700 12,300	3750 8,100			4550 10,000	3050 6,700	7.10 23.29
-3.0 m -10.0 ft	kg lb	*14 200 *30,750	10 750 23,050	8950 19,200	5650 12,200	5800 12,500	3850 8,300			5600 12,400	3700 8,250	6.17 20.24

Reach Boom Lift Capacities – Counterweight: 3.7 mt (8,160 lb) – without Bucket



Reach Boom	Unit	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		
		kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	
7.5 m 25.0 ft	kg lb											*3800 *8,500	*3800 *8,500	5.59 17.92
6.0 m 20.0 ft	kg lb							*5900 *12,400	4350 9,300			*3500 *7,700	3500 *7,700	6.83 22.19
4.5 m 15.0 ft	kg lb					*7400 *15,950	6550 14,050	6200 13,350	4200 9,050	*3850 2950		*3400 *7,500	2900 6,400	7.57 24.74
3.0 m 10.0 ft	kg lb					*9350 *20,050	6050 13,000	6000 12,850	4000 8,600	4250 9,150	2850 6,150	*3500 *7,650	2600 5,750	7.96 26.08
1.5 m 5.0 ft	kg lb					8900 19,100	5600 12,100	5750 12,400	3800 8,150	4150 8,950	2800 5,950	*3750 *8,150	2500 5,500	8.05 26.41
0 m 0 ft	kg lb					8650 18,600	5400 11,650	5600 12,050	3650 7,850	4100 8,800	2700 5,850	3850 8,450	2550 5,600	7.86 25.77
-1.5 m -5.0 ft	kg lb			*9700 *21,100	*9700 *21,950	8650 18,550	5400 11,600	5550 11,950	3600 7,800			4200 9,250	2800 6,150	7.35 24.08
-3.0 m -10.0 ft	kg lb			*14 650 *31,700	10 450 22,400	8750 18,750	5500 11,800	5650 12,150	3700 7,950			5100 11,300	3350 7,450	6.46 21.08
-4.5 m -15.0 ft	kg lb					*7950 *16,650	5750 12,400					*6900 *15,050	5000 11,350	4.98 16.03



ISO 10567:2007



* 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.

Lift capacity stays with ±5% for all available track shoes.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

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Bucket Specifications and Compatibility

	Linkage	Width		Capacity		Weight		Fill %	Standard Undercarriage	
		mm	in	m ³	yd ³	kg	lb		3.7 mt (8,160 lb) Counterweight	
									Reach Boom	
									R2.25 (7'5") Stick	HD R2.5 (8'2") Stick
Pin-On (No Quick Coupler)										
General Duty (GD)	B	1151	45	0.92	1.20	788	1,737	100	☉	☉
General Duty (GD)	B	1256	50	1.00	1.31	802	1,768	100	☉	☉
Maximum load with pin-on (payload + bucket)								kg	2588	2602
								lb	5,706	5,736

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:

☉ 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.

320D3 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
ENGINE			UNDERCARRIAGE AND STRUCTURES		
Diesel engine, ALUW06DTI/8 – mechanical governor – emits equivalent to U.S. EPA Tier 2, noncertified	✓		Grease lubricated track link	✓	
Two selectable power modes: STD and Eco	✓		Tie down points on base frame	✓	
One-touch low idle with automatic engine speed control (AEC)	✓		Center track guiding guard	✓	
Two stage fuel filtration system with water separator and indicator	✓		Segmented track guiding guard		✓
4000 m (13,120 ft) altitude capability with derate from 3000 m (9,840 ft)	✓		3.7 mt (8,160 lb) counterweight	✓	
52° C (126° F) high-ambient cooling capacity with derate above 48° C (118° F)	✓		600 mm (24") triple grouser track shoes (8.5 mm/0.3" thick)	✓	
-18° C (0° F) cold start capability	✓		600 mm (24") triple grouser track shoes (10 mm/0.4" thick)		✓
-32° C (-25° F) cold start capability (available with attachment kit)		✓	BOOMS, STICKS AND LINKAGES		
85 amp alternator	✓		5.7 m (18'8") Reach boom	✓	
Radial sealed double element air filter	✓		2.25 m (7'5") Reach stick	✓	
Air precleaner		✓	2.5 m (8'2") HD Reach stick		✓
Mechanical fuel priming pump	✓		Bucket linkage, B1 family without lifting eye	✓	
HYDRAULIC SYSTEM			ELECTRICAL SYSTEM		
Hydraulic boom and stick regeneration circuits	✓		2 × 750 CCA maintenance free batteries	✓	
Automatic two-speed travel		✓	Centralized electrical disconnect switch	✓	
Boom and stick drift reduction valve	✓		90 seconds programmable time delay working lights (halogen); storage box mounted (one), cab mounted (two), boom mounted LH (one)	✓	
High performance hydraulic return filter (capsule filter type)	✓				

(continued on next page)

320D3 GC Hydraulic Excavator Specifications

Standard and Optional Equipment *(continued)*

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

	Standard	Optional		Standard	Optional
SERVICE AND MAINTENANCE			CAB		
Engine oil, fuel, and hydraulic oil filters grouped for ease of maintenance	✓		Sound suppressed cab with viscous mounts	✓	
S·O·S SM sampling ports	✓		Openable skylight	✓	
Radiator screen for radiator/oil cooler to prevent plugging by debris	✓		Openable tempered front upper windshield	✓	
SAFETY AND SECURITY			Rear window emergency exit	✓	
Rearview mirrors; handrail mounted (one), cab handhold mounted (one)	✓		Removable tempered lower windshield with in cab storage bracket	✓	
Bolt free service platform with anti-skid plate	✓		Fully adjustable mechanical suspension seat, console and armrest	✓	
Neutral lever (lock out) for all controls	✓		51 mm (2 in) seat belt	✓	
Ground level accessible engine shutoff lever in cab	✓		Two gauge cluster (monitor)	✓	
Signaling/warning horn	✓		Automatic air conditioner with pressurized function	✓	
Right-hand handrail and hand hold	✓		Dual USB charging ports	✓	
			Roll down sun screen		✓
			Washable floor mat	✓	
			Interior utilities (interior lighting, cigar lighter type socket, coat hook, beverage holder, document holding space, rear storage compartment)	✓	
			Control pattern changer		✓
			CAT TECHNOLOGY		
			Cat Product Link™	✓	

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.

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Replaces AEXQ2880-01
(India)

