



# 323D3

## 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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## Engine

Engine Model	Cat® C7.1	
Net Power ISO 9249	106 kW	142 hp
ISO 9249 (DIN)	144 hp (metric)	
Engine Power ISO 14396	113 kW	152 hp
ISO 14396 (DIN)	154 hp (metric)	
Bore	105 mm	4 in
Stroke	135 mm	5 in
Displacement	7.01 L	428 in <sup>3</sup>
Biodiesel Capability	Up to B20 <sup>(1)</sup>	

- The 323D3 meets UN R96 Stage II emission standards, equivalent to U.S. EPA Tier 2 and EU Stage II.
- Recommended for use up to 4000 m (13,120 ft) altitude with engine power derate above 3000 m (9,840 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 1,800 rpm.

- <sup>(1)</sup> 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 (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.

\*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	11.88 rpm	
Swing Torque	62 kN·m	45,581 lbf·ft

## Weights

Operating Weight	22 600 kg	49,800 lb
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- 4.5 m (14'8") Long undercarriage, 5.7 m (18'8") HD Reach boom, 2.5 m (8'2") HD Reach stick, 1.20 m<sup>3</sup> (1.57 yd<sup>3</sup>) SDA bucket, 600 mm (24") triple grouser track shoes and 4000 kg (8,820 lb) counterweight.

## Track

Standard Track Shoes Width	600 mm	24 in
Number of Shoes (each side)	49	
Number of Track Rollers (each side)	8	
Number of Carrier Rollers (each side)	2	

## Drive

Maximum Gradeability	35°/70%	
Maximum Travel Speed	5.8 km/h	3.6 mph
Maximum Drawbar Pull	210 kN	47,210 lbf

## Hydraulic System

Main System – Maximum Flow – Implement	429 L/min (214.5 L/min × 2 pumps)	113 gal/min (53 gal/min × 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 Flow	17 L/min	4 gal/min
Pilot System – Maximum Pressure	4100 kPa	595 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	120 mm	5 in
Bucket Cylinder – Stroke	1104 mm	43 in

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## Service Refill Capacities

Fuel Tank Capacity	390 L	103.0 gal
Cooling System	28 L	7.4 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)	218 L	57.6 gal
Hydraulic Tank	115 L	30.4 gal

## Standards

Brakes	ISO 10265:2008
Cab/Rollover Protective Structure (ROPS) (optional)	ISO 12117-2:2008
Cab	ISO 10262:1998 - Level I
Operator Protective Guards (OPG) (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.

## Operating Weights and Ground Pressures

	600 mm (24") Wide, 12 mm (0.5") Thick Triple Grouser Shoes				600 mm (24") Wide, 10 mm (0.4") Thick Triple Grouser Shoes			
	Weight		Ground Pressure		Weight		Ground Pressure	
<b>Base machine with 4000 kg (8,820 lb) Counterweight and 4.5 m (14'8") Long Undercarriage</b>								
5.7 m (18'8") HD Reach boom, 2.5 m (8'2") HD Reach stick, 1.20 m <sup>3</sup> (1.57 yd <sup>3</sup> ) SD bucket	22 600 kg	49,800 lb	46.8 kPa	6.8 psi	22 300 kg	49,200 lb	46.4 kPa	6.7 psi

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

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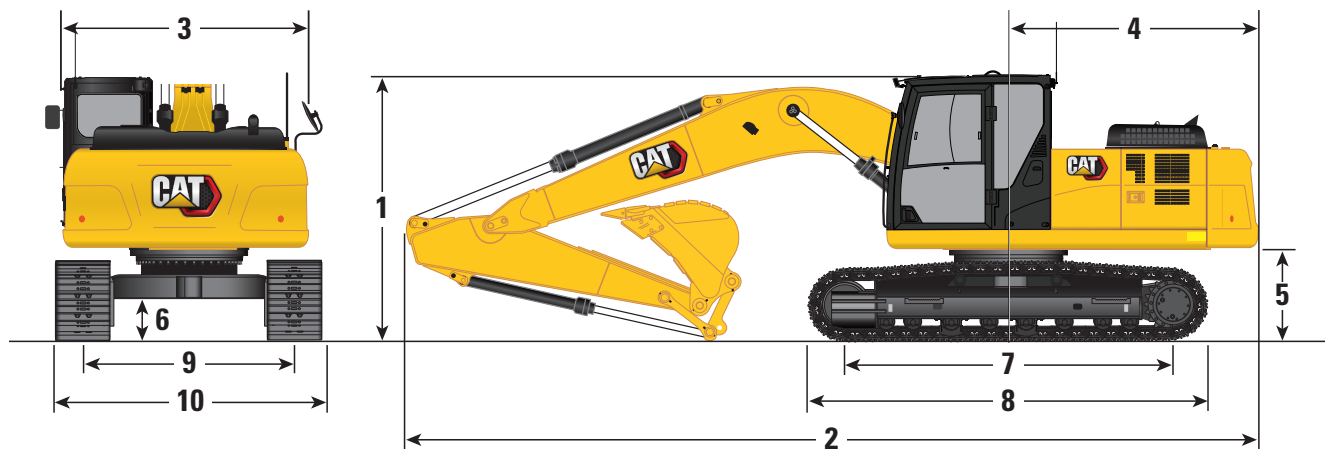
## Major Component Weights

	kg	lb
Base machine with 4000 kg (8,820 lb) counterweight, swing frame, base frame with track rollers and carrier rollers, two boom cylinders, pins, fluids and 75 kg (165 lb) operator	15 350	33,850
Track Shoes:		
600 mm (24") Width, 12 mm (0.5") Thick, Triple Grouser Track Shoes	3130	6,900
600 mm (24") Width, 10 mm (0.4") Thick, Triple Grouser Track Shoes	2820	6,220
Two Boom Cylinders	360	790
Weight of 90% Fuel Tank and 75 kg (165 lb) Operator	430	940
Counterweight:		
4000 kg (8,820 lb) Counterweight	4000	8,820
Swing Frame:		
Standard Swing Frame	1910	4,210
Undercarriage:		
Base Frame with Standard Track Rollers and Carrier Rollers for 4.5 m (14'8") Long Undercarriage	4690	10,340
Boom (including lines, pins, stick cylinder):		
HD Reach Boom 5.7 m (18'8")	2020	4,450
Stick (including lines, pins, bucket cylinder, bucket linkage):		
HD Reach Stick 2.5 m (8'2")	1080	2,380
Bucket (without linkage):		
1.20 m <sup>3</sup> (1.57 yd <sup>3</sup> ) SD, with Sidecutter and Tip	990	2,190

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## Dimensions

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

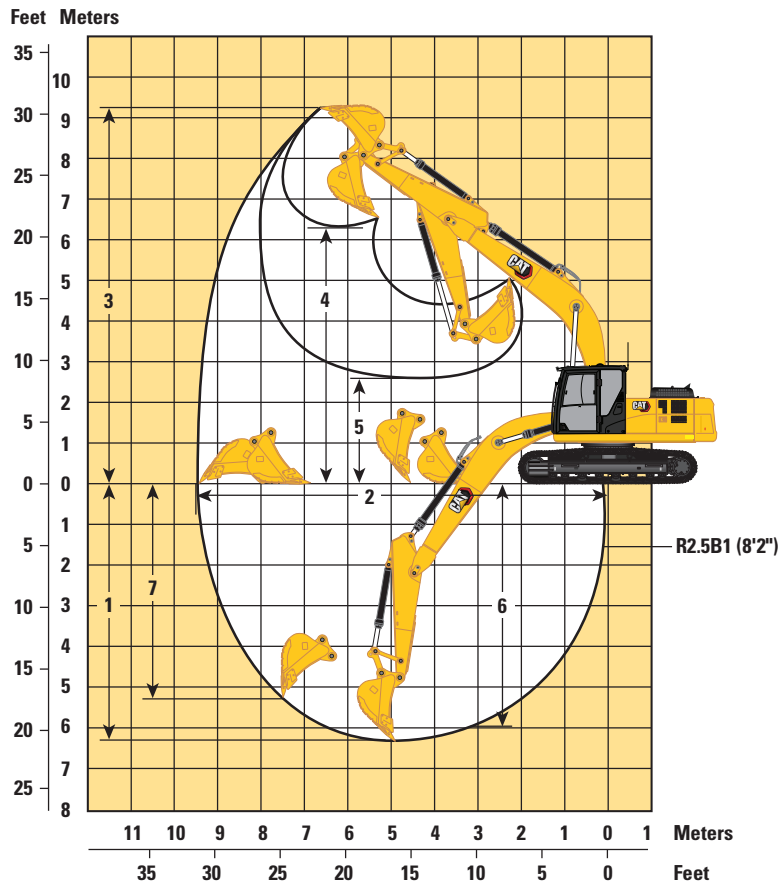


<b>Boom Option</b>	<b>HD Reach Boom 5.7 m (18'8")</b>	
<b>Stick Option</b>	<b>HD Reach Stick 2.5 m (8'2")</b>	
<b>1 Machine Height:</b>		
Cab Height (including shoe lug height)	2970 mm	9'9"
Shipping Height (including shoe lug height)	3050 mm	10'0"
Handrail Height	3015 mm	9'11"
<b>2 Machine Length with Boom/Stick/Bucket Installed</b>	9530 mm	31'3"
<b>3 Upperframe Width</b>	2740 mm	9'0"
<b>4 Tail Swing Radius</b>	2750 mm	9'0"
<b>5 Counterweight Clearance (without shoe lug height)</b>	1020 mm	3'4"
<b>6 Ground Clearance (without shoe lug height)</b>	450 mm	1'6"
<b>7 Track Length to Center of Rollers</b>	3650 mm	12'0"
<b>8 Track Length</b>	4460 mm	14'8"
<b>9 Track Gauge – Undercarriage</b>	2380 mm	7'10"
<b>10 Transport Width – 600 mm (24") Shoes</b>	2980 mm	9'9"
Bucket Type	SD	
Bucket Capacity	1.20 m <sup>3</sup>	1.57 yd <sup>3</sup>
Bucket Tip Radius	1502 mm	4'11"

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## Working Ranges and Forces

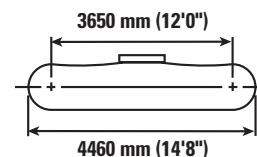
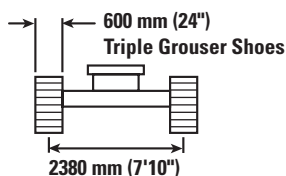
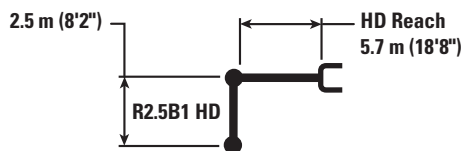
All dimensions are approximate and may vary depending on bucket selection.



Boom Option	HD Reach Boom 5.7 m (18'8")	
Stick Option	HD Reach Stick 2.5 m (8'2")	
1 Maximum Digging Depth	6300 mm	20'8"
2 Maximum Reach at Ground Line	9470 mm	31'1"
3 Maximum Cutting Height	9250 mm	30'4"
4 Maximum Loading Height	6290 mm	20'8"
5 Minimum Loading Height	2590 mm	8'6"
6 Maximum Depth Cut for 2240 mm (8 ft) Level Bottom	5960 mm	19'7"
7 Maximum Vertical Wall Digging Depth	5720 mm	18'9"
Bucket Digging Force (ISO)	147 kN	33,050 lbf
Stick Digging Force (ISO)	111 kN	24,950 lbf
Bucket Type	SD	
Bucket Capacity	1.20 m <sup>3</sup>	1.57 yd <sup>3</sup>
Bucket Tip Radius	1502 mm	4'11"

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## HD Reach Boom Lift Capacities – without Bucket Linkage



		3000 mm/10'0"		4500 mm/15'0"		6000 mm/20'0"		7500 mm/25'0"				mm ft in
7500 mm 25'0"	kg lb									*4450 *9,900	*4450 *9,900	5600 17'11"
6000 mm 20'0"	kg lb					*5150 *11,350	*5150 *11,350			*4050 *8,950	*4050 *8,950	6830 22'2"
4500 mm 15'0"	kg lb			*6550 *14,100	*6550 *14,100	*5600 *12,150	5150 11,100	*4500 3600		*4000 *8,750	3550 7,800	7570 24'8"
3000 mm 10'0"	kg lb			*8200 *17,650	7450 16,100	*6300 *13,700	4900 10,550	5450 11,650	3500 7,500	*4100 *8,950	3200 7,000	7960 26'0"
1500 mm 5'0"	kg lb			*9700 *20,900	6950 15,000	*7050 *15,300	4650 10,050	5300 11,400	3400 7,300	*4350 *9,550	3050 6,700	8050 26'4"
0 mm 0'0"	kg lb			*10 350 *22,350	6700 14,450	7250 15,600	4500 9,700	5250 11,250	3300 7,150	*4900 *10,750	3100 6,850	7860 25'9"
-1500 mm -5'0"	kg lb	*10 450 *23,750	*10 450 *23,750	*10 200 *22,050	6700 14,350	7200 15,450	4450 9,550			5400 11,850	3400 7,500	7350 24'0"
-3000 mm -10'0"	kg lb	*12 750 *27,650	*12 750 *27,650	*9250 *19,950	6800 14,600	*6800 *14,550	4550 9,750			*6100 *13,400	4100 9,150	6470 21'0"
-4500 mm -15'0"	kg lb			*6850 *14,350	*6850 *14,350					*5900 *12,950	*5900 *12,950	4980 16'0"



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.

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	HD Reach Boom	
		mm	in	m <sup>3</sup>	yd <sup>3</sup>	kg	lb		%	2.5 m (8'2") HD Reach Stick
										600 mm (24") Shoes
<b>Pin-On (No Quick Coupler)</b>										
Severe Duty	B	1450	57	1.20	1.57	921	2,030	95	⊙	
Maximum load with pin-on (payload + bucket)								kg	2973	
								lb	6,554	

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>)

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.

## Attachments Offering Guide

### PIN-ON ATTACHMENTS

Boom Type		HD Reach Boom
Stick Size		2.5 m (8'2") HD Reach Stick
Hydraulic Hammers	H120GCS Top-mount	✓
	I20GC Side-mount	✓
	H120Es	✓

## Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
<b>ENGINE</b>			<b>UNDERCARRIAGE AND STRUCTURES</b>		
Diesel engine, C7.1 1106C – mechanical governor – meets UN R96 Stage II, equivalent to Tier 2 and Stage II	✓		Grease lubricated track link	✓	
Two selectable power modes: Standard and Eco	✓		Tie down points on base frame	✓	
One touch low idle with auto engine speed control (AEC)	✓		Center track guiding guard	✓	
Two stage fuel filtration system with water separator and indicator	✓		Segmented HD track guiding guard	✓	
4000 m (13,120 ft) altitude capability with derate from 3000 m (9,840 ft)	✓		Full length track guiding guard		✓
52° C (125° F) high ambient cooling capability with derate from 48° C (118° F)	✓		Heavy duty track rollers	✓	
-32° C (-25° F) cold start capability		✓	4000 kg (8,820 lb) counterweight	✓	
75 amp alternator	✓		4460 mm (14'8") Long undercarriage	✓	
Radial seal air filter with double filter element	✓		600 mm (24") triple grouser track shoes (12 mm/0.5" thick)	✓	
Air pre-cleaner		✓	600 mm (24") triple grouser track shoes (10 mm/0.4" thick)		✓
Electric fuel priming pump	✓		<b>BOOM AND STICK</b>		
Fuel flow meter		✓	5.7 m (18'8") HD Reach boom	✓	
<b>HYDRAULIC SYSTEM</b>			2.5 m (8'2") HD Reach stick	✓	
Electronic main control valve, hammer ready	✓		<b>ELECTRICAL SYSTEM</b>		
Back-to-back electronic pump	✓		2 × 750 CCA maintenance free batteries	✓	
Boom and Stick regeneration circuits	✓		Centralized electrical disconnect switch	✓	
Automatic hydraulic warm up	✓		LED chassis and cab lights	✓	
Automatic two-speed travel	✓		LED left-side boom light	✓	
Hammer lines		✓	LED right-side boom light		✓
Hammer return filter		✓			
High performance hydraulic return filter	✓				

(continued on next page)

# 323D3 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>SERVICE AND MAINTENANCE</b>			<b>CAB</b>		
Engine oil, fuel, and hydraulic oil filters grouped for ease of maintenance	✓		Sound suppressed cab with viscous mounts	✓	
Scheduled Oil Sampling (S·O·S <sup>SM</sup> ) ports	✓		High-resolution 203 mm (8") LCD touchscreen monitor	✓	
Radiator screen for radiator/oil cooler to prevent plugging by debris	✓		Mechanically adjustable seat with headrest	✓	
<b>SAFETY AND SECURITY</b>			Automatic bi-level air conditioner	✓	
ROPS		✓	Keyless push-to-start engine control	✓	
Anti-skid plating with countersunk bolts	✓		1-button joystick	✓	
OPG with matching lights		✓	3-button joystick		✓
Handrail and handhold	✓		AM/FM radio with USB and auxiliary port	✓	
Lockable external tool/storage box	✓		24V DC outlet	✓	
Rearview camera		✓	Cup holder and storage compartments	✓	
Signaling/warning horn	✓		70/30 tempered glass windshield	✓	
Hydraulic lockout lever	✓		Upper radial wiper with washer	✓	
Travel alarm		✓	Openable steel hatch	✓	
			Dome light	✓	
			Washable floor mat	✓	
			<b>CAT TECHNOLOGY</b>		
			VisionLink <sup>®</sup>	✓	

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## Dealer Installed Kit and Attachments

Attachments may vary. Consult your Cat dealer for details.

<b>CAB</b> <ul style="list-style-type: none"><li>• Right Hand (RH) Floor pedal for hammer</li></ul>	<b>SAFETY AND SECURITY</b> <ul style="list-style-type: none"><li>• Travel alarm</li></ul>	<b>MAINTENANCE AND IMPROVEMENT</b> <ul style="list-style-type: none"><li>• Fuel flow meter</li></ul>
<b>GUARD</b> <ul style="list-style-type: none"><li>• Front mesh guard</li></ul>	<b>LINES</b> <ul style="list-style-type: none"><li>• Hammer lines</li></ul>	

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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(India)

