



Cat[®] 310

MINI HYDRAULIC EXCAVATOR

FEATURES:

The Cat[®] 310 Mini Excavator delivers maximum power and performance in a mini size to help you work in a wide range of applications.

ALL DAY COMFORT

- A sealed and pressurized cab is equipped with an improved air conditioning system, adjustable wrist rests and a suspension seat to help keep you working comfortably all day long.

EASY TO OPERATE

- Controls are easy to use and the intuitive Next Generation Monitor provides customizable machine operator preferences and easy to read machine information.

STICK STEER TRAVEL MODE

- Moving around the job site is even easier with the Cat Stick Steer option. Easily switch from traditional travel controls with levers and pedals to joystick controls with a push of a button. The benefit of less effort and improved control is in your hands!

BIG PERFORMANCE IN A MINI DESIGN

- Increased lifting, swinging, travel and multi-functioning performance helps you get the job done more efficiently. Dig-to-blade and dozer blade float features allow for easy clean up.

SAFETY ON THE JOB SITE

- Your safety is our top priority. The Cat Mini Excavator is designed to help keep you safe on the job. A back-up camera, courtesy work lights and a fluorescent retractable seat belt with optional seat belt reminder system are just a few of the safety features we've built into the machine.

SIMPLE SERVICE FOR LESS DOWNTIME

- Maintenance is quick and easy on the Cat Mini Excavator. Routine check points are easy to access at ground level with grouped service points and robust service panels.

LOWER OPERATING COSTS

- Equipped with features such as auto idle, auto engine shutdown, and efficient hydraulics with a variable displacement pump, the Cat Mini Excavator was designed with reducing your operating costs in mind.

UNMATCHED DEALER SUPPORT

- Your Cat dealer is here to help you reach your business goals. From providing equipment solutions to operator training to service needs and beyond, your Cat dealer is ready to help.



310 Mini Hydraulic Excavator

Specifications

Engine

Engine Model	Cat C3.3B	
Net Power		
ISO 9249, 80/1269/EEC	53.3 kW	71.5 hp
Engine Power		
ISO 14396	55.4 kW	74.3 hp
Bore	94 mm	3.7 in
Stroke	120 mm	4.7 in
Displacement	3.33 L	203 in ³

- China Nonroad Stage III, Equivalent to EU Stage IIIA.
- 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 at the rated speed of 2,200 rpm and the engine is installed with the factory configured fan, air intake system, exhaust system and alternator with a minimum alternator load.

Weights

Minimum Operating Weight with Cab*	9601 kg	21,166 lb
Maximum Operating Weight with Cab**	10 182 kg	22,447 lb

*Minimum Weight is based on steel tracks, no counterweight, operator, full fuel tank, long stick, blade and no bucket.

**Maximum Weight is based on steel tracks with rubber pads, counterweight, operator, full fuel tank, long stick, blade and no bucket.

Weight Increase from Minimum Configuration

Counterweight	250 kg	552 lb
Steel Tracks with Pads	330 kg	728 lb
Blade	360 kg	794 lb

Travel System

Travel Speed – High	4.7 km/h	2.9 mph
Travel Speed – Low	2.6 km/h	1.6 mph
Maximum Traction Force – High Speed	28.9 kN	6,497 lb
Maximum Traction Force – Low Speed	84.8 kN	19,064 lb
Ground Pressure – Minimum Weight	41.68 kPa	6 psi
Ground Pressure – Maximum Weight	44.2 kPa	6 psi
Gradeability (maximum)	30 degrees	

Service Refill Capacities

Cooling System	10.0 L	2.6 gal
Engine Oil	11.2 L	3.0 gal
Fuel Tank	145 L	38 gal
Hydraulic Tank	53 L	14 gal
Hydraulic System	140 L	37 gal

Hydraulic System

Load Sensing Hydraulics with Variable Displacement Piston Pump		
Pump Flow @ 2,400 rpm	233 L/min	62 gal/min
Operating Pressure – Equipment	285 bar	4,134 psi
Operating Pressure – Travel	285 bar	4,134 psi
Operating Pressure – Swing	230 bar	3,336 psi
Auxiliary Circuit – Primary		
Flow	131 L/min	35 gal/min
Pressure	285 bar	4,134 psi
Auxiliary Circuit – Secondary		
Flow	33 L/min	9 gal/min
Pressure	285 bar	4,134 psi
Digging Force – Stick	49.2 kN	11,060 lb
Digging Force – Bucket	77.7 kN	17,459 lb

Swing System

Machine Swing Speed	10.6 rpm
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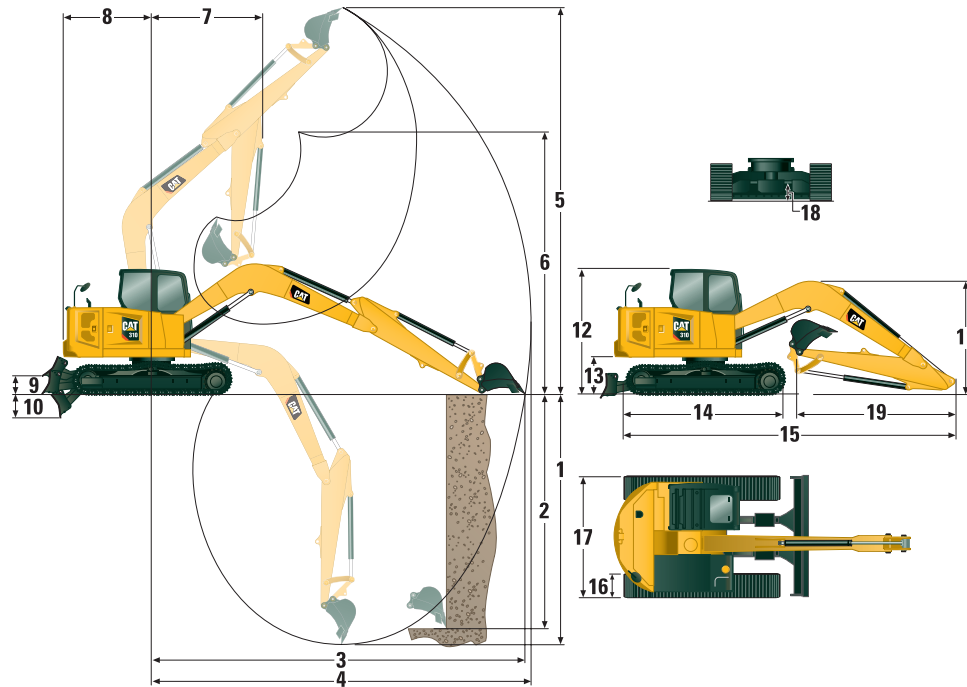
Blade

Width (Standard)	2470 mm	97 in
Width (Wide)	2640 mm	104 in
Height	431 mm	17 in

Certification – Cab

Roll Over Protective Structure (ROPS)	ISO 12117-2:2008
Top Guard	ISO 10262:1998 (Level I)

Specifications *(continued)*



Dimensions

1 Dig Depth	5211 mm	205 in
2 Vertical Wall	4873 mm	192 in
3 Maximum Reach at Ground Level	7518 mm	296 in
4 Maximum Reach	7644 mm	301 in
5 Maximum Dig Height	7970 mm	314 in
6 Maximum Dump Clearance	5829 mm	230 in
7 Boom in Reach	2272 mm	90 in
8 Tail Swing with Counterweight	1995 mm	79 in
Tail Swing without Counterweight	1800 mm	71 in
9 Maximum Blade Height	355 mm	14 in
10 Maximum Blade Depth	671 mm	26 in
11 Boom Height in Shipping Position	2884 mm	114 in
12 Cab Height	2607 mm	103 in
13 Swing Bearing Height	822 mm	32 in
14 Overall Undercarriage Length	3200 mm	126 in
15 Overall Shipping Length	6579 mm	259 in
16 Track Belt/Shoe Width	450 mm	18 in
17 Overall Track Width	2470 mm	97 in
18 Ground Clearance	356 mm	14 in
19 Stick Length	2500 mm	98 in

310 Mini Hydraulic Excavator

Lift Capacities – Minimum Configuration*

Lift Point Height			3 m (9.8 ft)			4.5 m (14.8 ft)			Lift Point Radius (Maximum)			
			Over Front		Over Side	Over Front		Over Side	Over Front		Over Side	m (ft)
			Blade Down	Blade Up		Blade Down	Blade Up		Blade Down	Blade Up		
4.5 m (14.8 ft)	Long Stick	kg (lb)	2707 (5,968)	2707 (5,968)	2694 (5,939)	2547 (5,615)	2547 (5,615)	2554 (5,631)	1364 (3,007)	1364 (3,007)	1364 (3,007)	6.06 (19.9)
3 m (9.8 ft)	Long Stick	kg (lb)	3694 (8,144)	3694 (8,144)	3735 (8,234)	2865 (6,316)	2865 (6,316)	2884 (6,358)	1361 (3,000)	1361 (3,000)	1361 (3,000)	6.61 (21.7)
1.5 m (4.9 ft)	Long Stick	kg (lb)	4864 (10,723)	4864 (10,723)	4952 (10,917)	3278 (7,227)	3278 (7,227)	2304 (5,079)	1440 (3,175)	1440 (3,175)	1202 (2,650)	6.79 (22.3)
0 m (0 ft)	Long Stick	kg (lb)	5337 (11,766)	5337 (11,766)	3880 (8,554)	3502 (7,721)	2728 (6,014)	2136 (4,709)	1623 (3,578)	1623 (3,578)	1204 (2,654)	6.64 (21.8)

*Minimum Weight includes steel tracks, no counterweight, operator, full fuel tank, long stick, blade and no bucket.

Lift Capacities – Maximum Configuration**

Lift Point Height			3 m (9.8 ft)			4.5 m (14.8 ft)			Lift Point Radius (Maximum)			
			Over Front		Over Side	Over Front		Over Side	Over Front		Over Side	m (ft)
			Blade Down	Blade Up		Blade Down	Blade Up		Blade Down	Blade Up		
4.5 m (14.8 ft)	Long Stick	kg (lb)	2709 (5,972)	2709 (5,972)	2696 (5,944)	2548 (5,617)	2548 (5,617)	2556 (5,635)	1364 (3,007)	1364 (3,007)	1364 (3,007)	6.06 (19.9)
3 m (9.8 ft)	Long Stick	kg (lb)	3702 (8,162)	3702 (8,162)	3743 (8,252)	2868 (6,323)	2868 (6,323)	2887 (6,365)	1361 (3,000)	1361 (3,000)	1361 (3,000)	6.61 (21.7)
1.5 m (4.9 ft)	Long Stick	kg (lb)	4871 (10,739)	4871 (10,739)	4959 (10,933)	3280 (7,231)	3280 (7,231)	2537 (5,593)	1441 (3,177)	1441 (3,177)	1441 (3,177)	6.79 (22.3)
0 m (0 ft)	Long Stick	kg (lb)	5337 (11,766)	5337 (11,766)	4295 (9,469)	3502 (7,721)	3014 (6,645)	2370 (5,225)	1624 (3,580)	1624 (3,580)	1347 (2,970)	6.64 (21.8)

**Maximum Weight includes steel tracks with rubber pads, counterweight, operator, full fuel tank, long stick, blade and no bucket.

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® C3.3B engine meets China Nonroad Stage III, equivalent to EU Stage IIIA, emission standards.
- 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 1.0 kg (2.20 lb) of refrigerant which has a CO₂ equivalent of 1.430 metric tonnes (1.576 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

Operator Sound Pressure 72 dB(A) (ISO 6396:2008)*

Exterior Sound Power Level 99 dB(A) (ISO 6395:2008)**

*The declared dynamic operator sound pressure levels per ISO 6396:2008. The measurements were conducted with the cab doors and windows closed.

**The labeled sound power level for the CE marked configurations when measured according to the test procedure and conditions specified in 2000/14/EC.

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
 - Power On Demand provides full time efficiency and power when you need it, and is transparent to the operator
 - Auto idle and auto engine shutdown
 - Extended maintenance intervals reduce fluid and filter consumption
 - Remote Flash and Remote Troubleshoot (if equipped)
 - Mini Hydraulic Excavator Ease of Use features improve operator efficiency minimizing fuel consumption (if equipped)
 - Cat Grade with Advanced 2D and 3D improves operator efficiency minimizing fuel consumption (if equipped)

Recycling

- The materials included in machines are categorized as below with approximate weight percentage. Because of variations of product configurations, the following values in the table may vary.

Material Type	Weight Percentage
Steel	65.52%
Iron	21.19%
Rubber	3.50%
Mixed Metal	2.20%
Other	1.89%
Nonferrous Metal	1.81%
Plastic	1.55%
Fluid	1.47%
Mixed-Metal and Nonmetal	0.85%
Mixed Nonmetallic	0.01%
Uncategorized	0.00%
Total	100.00%

- A machine with higher recyclability rate will ensure more efficient usage of valuable natural resources and enhance End-of-Life value of the product. According to ISO 16714:2008 (Earth-moving machinery – Recyclability and recoverability – Terminology and calculation method), recyclability rate is defined as percentage by mass (mass fraction in percent) of the new machine potentially able to be recycled, reused or both.

All parts in the bill of material are first evaluated by component type based on a list of components defined by the ISO 16714:2008 and Japan CEMA (Construction Equipment Manufacturers Association) standards. Remaining parts are further evaluated for recyclability based on material type.

Because of variations of product configurations, the following values in the table may vary.

Recyclability – 96%

The data provided above was based on the product configuration as provided by the individual product group.

310 Mini Hydraulic Excavator

Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
ENGINE			OPERATOR ENVIRONMENT (continued)		
Cat C3.3B Diesel Engine (China Nonroad Stage III and Equivalent to EU Stage IIIA – Electrical Governor and Turbo)	✓		Color LCD Monitor	✓	
Automatic Engine Idle	✓		– Fuel Level and Coolant Temperature Gauges	✓	
Automatic Engine Shutdown	✓		– Maintenance and Machine Monitoring	✓	
Automatic Swing Brake	✓		– Performance and Machine Adjustments	✓	
Automatic Two Speed Travel	✓		– Numeric Security Code	✓	
Fuel Water Separator with Indicator	✓		– Multiple Languages	✓	
Radial Seal – Double Element Air Filter	✓		– Camera Ready	✓	
Extended Life Coolant, –37° C (–35° F)	✓		– Hour Meter with Wake Up Switch	✓	
Ecology Drain	✓		– Jog Dial Control Interface	✓	
HYDRAULICS			Rain Visor		✓
Smart Tech Electronic Pump	✓		Air Suspension Heated Seat		✓
Variable Displacement Piston Pump	✓		UNDERCARRIAGE		
Load Sensing/Flow Sharing Hydraulics	✓		Greased and Lubricated Track	✓	
Power On Demand	✓		Hydraulic Track Adjusters	✓	
Hydraulic Temperature Monitoring	✓		Tie Down Eyes on Track Frame	✓	
Certified Accumulator	✓		Dozer Blade	✓	
HYDO™ Advanced Hydraulic Oil	✓		Dozer Float	✓	
OPERATOR ENVIRONMENT			Bolt-on, Reversible Wear Edge	✓	
Sealed and Pressurized Cab	✓		Steel Tracks (450 mm/17.7 in wide)	✓	
Stick Steer Mode	✓		GUARDING		
Travel Cruise Control	✓		ROPS – ISO 12117-2:2008	✓	
Control Pattern Changer	✓		Tip Over Protective Structure (TOPS) – ISO 12117:1997	✓	
Adjustable Wrist Rests	✓		Top Guard – ISO 10262:1998 (Level II)	✓	
Molded Footrests	✓		Top Guard – ISO 10262:1998 (Level II)		✓
Removable, Washable Floor Mat	✓		Front Guard (Mesh) ISO 10262:1998 (Level I)		✓
Travel Pedals and Hand Levers	✓		Front Guard (Heavy Duty) ISO 10262:1998 (Level II)		✓
Cat Key with Passcode Option	✓		Track Guards		✓
HVAC with Automatic Temperature Control	✓				
Hydraulic Lockout Controls	✓				
Integrated Lower Front Window	✓				
Assisted Front Window Overhead Storage	✓				
Rear Window Emergency Exit	✓				
Fabric, High Back, Suspension Seat	✓				
Retractable Seat Belt (75 mm/3 in)	✓				
Seat Belt Reminder System		✓			
Coat Hook	✓				
Cup Holder	✓				
LED Interior Light	✓				
Literature Holder	✓				
12V Power Socket	✓				
Radio – Bluetooth®, USB, Auxiliary, Microphone	✓				
Skylight	✓				

(continued on next page)

310 Mini Hydraulic Excavator

Standard and Optional Equipment *(continued)*

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

	Standard	Optional		Standard	Optional
BOOM, STICK AND LINKAGES			OTHER		
One Piece Boom (4300 mm/169.3 in)	✓		Attachments including Buckets, Augers and Hammers		✓
Long Stick (2500 mm/98.4 in)	✓		Steel Track with Rubber Pads		✓
Front Shovel Capable (Pin-On/Manual Coupler/Hydraulic Coupler – not available in all regions)	✓		Wide Steel Tracks (600 mm/23.6 in)		✓
Thumb Ready (not available in all regions)	✓		2nd Auxiliary Hydraulic Lines with Case Drain		✓
Certified Lifting Eye (not available in all regions)	✓		Boom and Stick Hose Burst Check Valves		✓
ELECTRICAL			Bucket Linkage with Lift Eye		✓
12 Volt Electrical System	✓		Water Jacket Heater		✓
60 Ampere Alternator	✓		Refueling Pump		✓
900 CCA Maintenance Free Battery	✓		Cab Guarding		✓
Battery Disconnect	✓				
Ignition Key Stop Switch	✓				
Signaling/Warning Horn	✓				
Product Link™ Elite Lite (regulations apply)	✓				
Travel Alarm	✓				
Rearview Camera		✓			
Rotating Beacon		✓			

310 Mini Hydraulic Excavator

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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