

Cat®
302 CR

Mini Excavator

Features:

The Cat® 302 CR Mini Excavator delivers power and performance in a compact size to help you work in a wide range of applications.

ALL DAY COMFORT

- Choose either a canopy or a sealed and pressurized cab equipped with air conditioning, adjustable wrist rests, and a suspension seat option to help keep you working comfortably all day long.

EASY TO OPERATE

- Controls are easy to use and the intuitive Next Generation LCD monitor provides 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 COMPACT DESIGN

- Strong lift and dig performance helps you get the job done faster. The compact radius design and retractable undercarriage lets you access and work in the tightest areas. 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. Courtesy work lights and a fluorescent retractable seat belt with optional seat belt reminder system are just a couple 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 through the side doors. The unique tilt up cab lets you reach additional service areas when needed.

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.

CAT®

Specifications

Engine

Engine Model	Cat® C1.1	
Net Power		
ISO 9249, 80/1269/EEC	15.7 kW	21 hp
Engine Power		
SAE J1995:2014	16.1 kW	21.6 hp
Bore	77.0 mm	3.0 in
Stroke	81.0 mm	3.2 in
Displacement	1.1 L	69.0 in^3

- Meets U.S. EPA Tier 4 Final and EU Stage V emissions standards.
- 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 2,400 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 Canopy*	1918 kg	4,229 lb
Maximum Operating Weight with Canopy**	2081 kg	4,588 lb
Minimum Operating Weight with Cab*	2057 kg	4,535 lb
Maximum Operating Weight with Cab**	2262 kg	4,987 lb
EU: CE Plate Weight with Canopy***	2045 kg	4,508 lb
EU: CE Plate Weight with Cab***	2140 kg	4,718 lb

*Minimum Weight is based on rubber tracks, operator, fixed undercarriage and full fuel tank.

**Maximum Weight is based on steel tracks, operator, expandable undercarriage and full fuel tank.

***CE Plate Weight is based on the most common EU configuration. Includes 75 kg (165 lb) operator and full fuel tank and excludes bucket.

Weight Increase from Minimum Configuration

Long Stick	8 kg	18 lb
Steel Tracks	60 kg	132 lb
Expandable Undercarriage	96 kg	212 lb

Travel System

Travel Speed – High	4.4 km/h	2.7 mph
Travel Speed – Low	2.9 km/h	1.8 mph
Maximum Traction Force – High Speed	13.2 kN	2,967.5 lbf
Maximum Traction Force – Low Speed	20.0 kN	4,496.2 lbf
Ground Pressure – Minimum Weight	23.7 kPa	3.4 psi
Ground Pressure – Maximum Weight	26.8 kPa	3.9 psi
Gradeability (maximum)	30 degrees	

Service Refill Capacities

Cooling System	3.9 L	1.0 gal
Engine Oil	4.4 L	1.2 gal
Fuel Tank	26.0 L	6.9 gal
Hydraulic Tank	18.0 L	4.8 gal
Hydraulic System	26.0 L	6.9 gal

Hydraulic System

Load Sensing Hydraulics with Variable Displacement Piston Pump		
Pump Flow @ 2,400 rpm	66 L/min	17.4 gal/min
Operating Pressure – Equipment	245 bar	3,553.4 psi
Operating Pressure – Travel	245 bar	3,553.4 psi
Operating Pressure – Swing	147 bar	2,132.1 psi
Auxiliary Circuit – Primary		
Flow	33 L/min	8.7 gal/min
Pressure	245 bar	3,553.4 psi
Auxiliary Circuit – Secondary		
Flow	14 L/min	3.7 gal/min
Pressure	245 bar	3,553.4 psi
Digging Force – Stick (standard)	11.3 kN	2,540.3 lbf
Digging Force – Stick (long)	9.8 kN	2,203.1 lbf
Digging Force – Bucket	19.6 kN	4,406.3 lbf

Swing System

Machine Swing Speed	9.8 rpm	

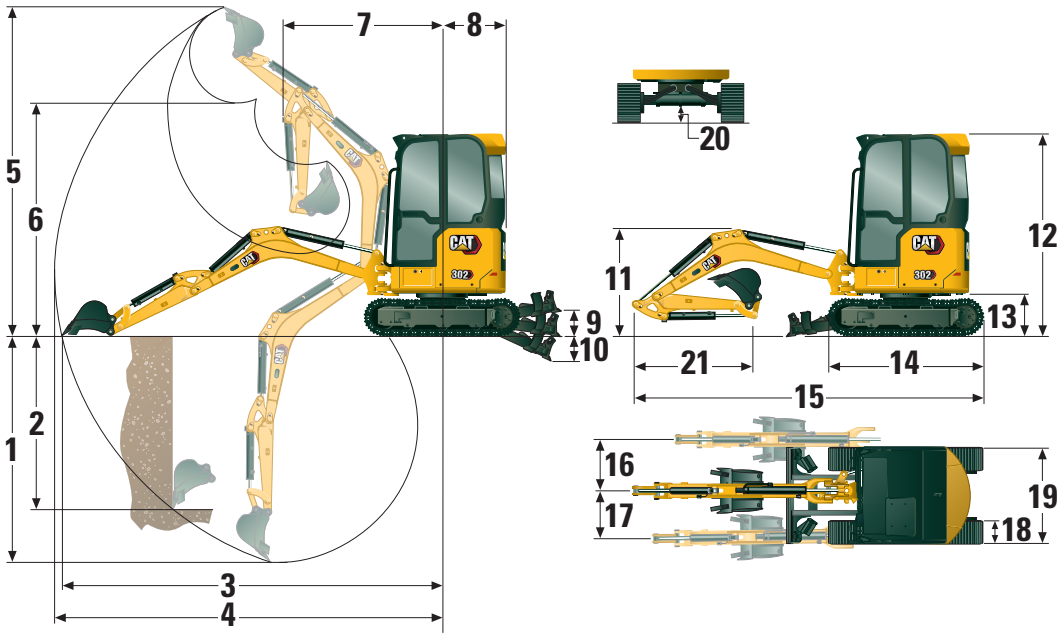
Blade

Width*	1090 mm	42.9 in
Height	225 mm	8.9 in

*Expanded – 1400 mm (55 in)

Certification – Cab and Canopy

Roll Over Protective Structure (ROPS)	ISO 12117-2:2008
Tip Over Protective Structure (TOPS)	ISO 12117:1997
Top Guard	ISO 10262:1998 (Level I)



Dimensions

		Standard Stick	Long Stick
1	Dig Depth	2370 mm (93.3 in)	2570 mm (101.2 in)
2	Vertical Wall	1850 mm (72.8 in)	1940 mm (76.4 in)
3	Maximum Reach at Ground Level	4040 mm (159.1 in)	4210 mm (165.7 in)
4	Maximum Reach	4110 mm (161.8 in)	4270 mm (168.1 in)
5	Maximum Dig Height	3550 mm (139.8 in)	3620 mm (142.5 in)
6	Maximum Dump Clearance	2560 mm (100.8 in)	2640 mm (103.9 in)
7	Boom in Reach	1660 mm (65.4 in)	1660 mm (65.4 in)
8	Tail Swing	750 mm (29.5 in)	750 mm (29.5 in)
9	Maximum Blade Height	285 mm (11.2 in)	285 mm (11.2 in)
10	Maximum Blade Depth	295 mm (11.6 in)	295 mm (11.6 in)
11	Boom Height in Shipping Position	1070 mm (42.1 in)	1020 mm (40.2 in)
12	Overall Shipping Height	2300 mm (90.6 in)	2300 mm (90.6 in)
13	Swing Bearing Height	442 mm (17.4 in)	442 mm (17.4 in)
14	Overall Undercarriage Length	1850 mm (72.8 in)	1850 mm (72.8 in)
15	Overall Shipping Length†	3900 mm (153.5 in)	3880 mm (152.8 in)
16	Boom Swing Right	50 degrees	50 degrees
17	Boom Swing Left	65 degrees	65 degrees
18	Track Belt/Shoe Width	250 mm (9.8 in)	250 mm (9.8 in)
19	Track Width		
	Retracted	1090 mm (42.9 in)	1090 mm (42.9 in)
	Expanded	1400 mm (55.12 in)	1400 mm (55.12 in)
20	Minimum Ground Clearance Below Undercarriage	150 mm (5.9 in)	150 mm (5.9 in)
21	Stick Length	960 mm (37.8 in)	1160 mm (45.7 in)

†Overall Shipping Length depends on blade position during shipment.

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Lift Capacities – Minimum Configuration*

Lift Point Height			2 m (6.6 ft)			Lift Point Radius (Maximum)			
			Over Front		Over Side	Over Front		Over Side	m (ft)
			Blade Up	Blade Down		Blade Up	Blade Down		
2 m (6.6 ft)	Standard Stick	kg (lb)				346 (769)	376 (831)	294 (654)	3.3 (10.8)
	Long Stick	kg (lb)				301 (665)	301 (665)	269 (598)	3.5 (11.7)
1.5 m (4.9 ft)	Standard Stick	kg (lb)	549 (1,161)	549 (1,161)	549 (1,161)	311 (687)	370 (817)	264 (584)	3.5 (11.7)
	Long Stick	kg (lb)				287 (635)	300 (661)	243 (539)	3.7 (12.5)
1 m (3.3 ft)	Standard Stick	kg (lb)	711 (1,532)	906 (1,915)	586 (1,265)	293 (648)	380 (836)	249 (550)	3.6 (12.5)
	Long Stick	kg (lb)	720 (1,549)	771 (1,628)	594 (1,280)	272 (600)	309 (680)	230 (508)	3.8 (12.5)
0 m (0 ft)	Standard Stick	kg (lb)	675 (1,450)	959 (2,067)	552 (1,189)	296 (653)	388 (856)	251 (553)	3.5 (11.7)
	Long Stick	kg (lb)	668 (1,437)	988 (2,123)	546 (1,176)	273 (602)	366 (806)	230 (508)	3.7 (12.5)

*Minimum Weight includes rubber tracks, canopy, operator, full fuel tank, fixed undercarriage, and no bucket.

Lift Capacities – Maximum Configuration**

Lift Point Height			2 m (6.6 ft)			Lift Point Radius (Maximum)			
			Over Front		Over Side	Over Front		Over Side	m (ft)
			Blade Up	Blade Down		Blade Up	Blade Down		
2 m (6.6 ft)	Standard Stick	kg (lb)				377 (833)	377 (833)	344 (766)	3.3 (10.8)
	Long Stick	kg (lb)				302 (667)	302 (667)	302 (667)	3.5 (11.7)
1.5 m (4.9 ft)	Standard Stick	kg (lb)	526 (1,444)	526 (1,114)	526 (1,444)	361 (799)	370 (816)	309 (684)	3.5 (11.7)
	Long Stick	kg (lb)				300 (660)	300 (660)	286 (633)	3.7 (12.5)
1 m (3.3 ft)	Standard Stick	kg (lb)	820 (1,765)	890 (1,880)	680 (1,466)	341 (753)	379 (834)	292 (644)	3.6 (12.5)
	Long Stick	kg (lb)	749 (1,582)	749 (1,582)	687 (1,482)	308 (678)	308 (678)	271 (598)	3.8 (12.5)
0 m (0 ft)	Standard Stick	kg (lb)	781 (1,678)	964 (2,078)	644 (1,386)	343 (757)	389 (857)	293 (646)	3.5 (11.7)
	Long Stick	kg (lb)	775 (1,666)	992 (2,129)	638 (1,373)	318 (700)	364 (802)	271 (596)	3.7 (12.5)

**Maximum Weight includes steel tracks, cab, operator, full fuel tank, expandable undercarriage, and no bucket.

Standard and Optional Equipment

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

	Standard	Optional
ENGINE		
Cat® C1.1 Engine (U.S. EPA Tier 4 Final/ EU Stage V)	✓	
Automatic Engine Idle	✓	
Automatic Engine Shutdown	✓	
Automatic Two Speed Travel	✓	
Fuel Water Separator	✓	
Power on Demand (not available in all regions)	✓	
Variable Displacement Piston Pump	✓	
Load Sensing/Flow Sharing Hydraulics	✓	
HYDRAULICS		
Smart Tech Electronic Pump	✓	
Accumulator	✓	
Automatic Swing Brake	✓	
Auxiliary Hydraulic Lines	✓	
One and Two Way Auxiliary Flow	✓	
Continuous Auxiliary Flow	✓	
Auxiliary Line Quick Disconnects	✓	
OPERATOR ENVIRONMENT		
Tilt-up Canopy or Tilt-Up Cab	✓	
Cab with Air Conditioning		✓
Cab with Heater		✓
Machine 2-Point Lifting	✓	
Stick Steer Mode	✓	
Travel Cruise Control	✓	
Control Pattern Changer (optional in some regions)	✓	✓
Adjustable Wrist Rests	✓	
Washable Floor Mat	✓	
Travel Pedals and Hand Levers	✓	
No Travel Pedals and Hand Levers		✓
Machine Security	✓	
Standard Key with Pass Code	✓	
Push to Start with Key Fob/Pass Code		✓
Fabric Suspension Seat (Cab only)	✓	

	Standard	Optional
OPERATOR ENVIRONMENT *(continued)*		
Vinyl Suspension Seat (Canopy only)	✓	
Vinyl Non-Suspension Seat (Canopy only)		✓
Hydraulic Lockout – All Controls	✓	
Retractable High Visibility Seat Belt (75 mm/3 in)	✓	
Seat Belt Reminder System		✓
Coat Hook	✓	
Cup Holder	✓	
Storage Pocket	✓	
Skylight	✓	
Mounting Bosses for Front	✓	
Signaling/Warning Horn	✓	
Interior Light (Cab only)	✓	
Boom Light, Halogen	✓	
LED Front Lights		✓
LED Front and Rear Lights		✓
LED Boom Light		✓
Utility Space for Mobile Phone	✓	
Mirrors Left and Right		✓
Radio – Bluetooth®, Auxiliary, Microphone, USB (charging only) (Cab only)		✓
Next Generation Color LCD Monitor (IP66)	✓	
– Fuel Level and Coolant Temperature Gauges		
– Maintenance and Machine Monitoring		
– Performance and Machine Adjustments		
– Numeric Security Code		
– Multiple Languages		
– Hour Meter with Wake Up Switch		
UNDERCARRIAGE		
Expandable Undercarriage		✓
Rubber Belt (250 mm/10 in wide)	✓	
Steel Track (250 mm/10 in wide)		✓
Dozer Blade	✓	
Dozer Blade Float	✓	
Hydraulic Track Adjusters	✓	
Tie Downs on Track Frame	✓	

(continued on next page)

Standard and Optional Equipment *(continued)*

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

	Standard	Optional
BOOM, STICK AND LINKAGES		
One Piece Boom (1850 mm/73 in)	✓	
Standard Stick (960 mm/37.8 in)	✓	
Long Stick (1160 mm/45.7 in)		✓
Front Shovel Capable	✓	
Pin-On	✓	
Dual Lock Manual Coupler		✓
Thumb Ready (not available in all regions)	✓	
Certified Lifting Eye (optional in some regions)	✓	
Attachments including Couplers, Thumbs, Buckets, Augers and Hammers		✓
2nd Auxiliary Hydraulic Lines		✓
Boom Lowering Control Valve (Standard in Europe)		✓
Stick Lowering Control Valve (Standard in Europe)		✓
Hydraulic Quick Coupler Lines (not available in all regions)		✓

	Standard	Optional
ELECTRICAL		
12 Volt Battery	✓	
Software (machine and monitor)	✓	
Maintenance Free Battery	✓	
Lock Out/Tag Out Battery Disconnect	✓	
Signaling/Warning Horn	✓	
12 Volt Power Socket	✓	
Product Link™ PL243 (regulations apply)		✓
Product Link PLE643 (regulations apply)		✓
Travel Alarm (standard in some regions)		✓
GUARDING		
ROPS ISO 12117-2:2008	✓	
TOPS ISO 12117:1997	✓	
Top Guard ISO 10262:1998 (Level I)	✓	
Polycarbonate Half Height Front Guard (Canopy only)		✓
Polycarbonate Front Guard (ISO 10262 1998 Level I and EN356 P5A)		✓
OTHER		
Bio Oil Capable		✓
Eco Drain		✓
Water Jacket Heater		✓

302 CR Environmental Declaration

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® C1.1 engine meets U.S. EPA Tier 4 Final and EU Stage V 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 or R1234yf (Europe) (Global Warming Potential = 1430). See label or instruction manual for gas refrigerant identification. The system contains 0.75 kg (1.65 lb), 0.90 kg (1.98 lb) or 1.0 kg (2.20 lb) of refrigerant which has a CO_2 equivalent of 1.430 metric tonnes (1.576 tons) for R134a and 0.001 tonnes (0.001 tons) for R1234yf (Europe).

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)

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	Machine Model 302CR
Weight Percentage (%)	Steel	65.26%
	Iron	13.07%
	Rubber	8.59%
	Other	3.04%
	Nonferrous Metal	2.93%
	Plastic	2.67%
	Fluid	2.35%
	Uncategorized	0.85%
	Mixed-Metal and Nonmetal	0.68%
	Mixed-Metal	0.54%
	Mixed-Nonmetallic	0.02%
	Total	100%

- 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 (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 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	95%

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

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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Replaces AEHQ8146-08
Build Number: 05A
(Global excluding
China and Japan)