

304C CR

Mini Hydraulic
Excavator



Diesel Engine

Net Power (ISO 9249) at 2400 rpm

31 kW/42.2 hp

Operating Weight (without extra counterweight)

With canopy

4635 kg

With cab

4755 kg

Caterpillar® 304C CR Mini Hydraulic Excavator

Engineered by Caterpillar to deliver high levels of productivity, versatility and serviceability.

Performance and Versatility

Fast, powerful digging, through smooth responsive hydraulics, ensures that the Cat C Series CR machines deliver the productivity that customers demand.

Load sensing hydraulics optimize flow for smooth powerful performance and increased fuel economy.

1 way (hammer) and 2 way (auger) auxiliary lines including quick connections are fitted as standard.

Optional 2nd auxiliary circuit increases work tool versatility, allowing operation of rotating work tools.

Dozer float function enables more efficient clean up and landscaping operations.

Choice of standard or long stick enables better matching of machine to application.

High rotation bucket angle combines good spoil retention and flat back trench characteristics.

Additional counterweight allows machine configuration to match the work tool and application.

Versatile Performance

With high performance levels and compact radius design the 304C CR delivers optimum productivity in the tightest applications.

Comfort and Ease of Operation

Cab and canopy options are available on the C Series CR.

Compact radius design gives greater machine versatility and capability to work within confined areas. The radius of the upper body stays within the width of the undercarriage so the operator can concentrate on the work being performed without having to worry about the back of the machine.

Automatic two speed travel function optimizes on site travel speed with the required tractive effort.

Joystick mounted auxiliary and boom swing controls give finger tip control of machine functions and an uncluttered floor.

Optional air conditioning or fan and sun blind package offers further operator comfort.



Low Operating Costs

Robust, reliable and easily serviced are key attributes of the C Series CR design.

Swing out rear door and side hood provide excellent access to regular service and maintenance points.

Radiator and oil cooler placed side by side for easy cleaning.

Protected front linkage lines are routed out of harms way above the boom and stick.

End dampening on both boom and stick cylinders reduces shock loading, increasing component life and improving soil retention when loading at height.

Liner bearings in the swing casting deliver longer component life and reduced parts replacement costs.

100% pilot controls maintain “as new” machine control and eliminate the need for linkage and cable maintenance.

500 hour oil and filter change period reduces operating costs and machine down time.

Customer Support

Caterpillar dealers offer unmatched customer support with excellent equipment management services and fast parts availability, resulting in maximum uptime and minimum repair costs.

Equipment maintenance and management services help optimize performance, reliability and profit.



Operator Station

Class leading space and high feature levels lead to a comfortable and productive environment.

Impressive cab dimensions. The CR C Series gives the operator a comfortable and spacious working environment with excellent visibility.

Even greater operator comfort. The clear flat floor space and superior operator legroom provide high levels of operator comfort and help minimize fatigue.

Sliding cab door. The sliding door system offers good access and maintains the machines compact dimensions to reduce the risk of damage.

Fully pilot operated controls. Pilot operated controls on all services including travel levers and dozer function, ensure that “as new” levels of controllability are maintained throughout the machine life.

High level of standard comfort features. Reclining suspension seat, power point, adjustable wrist rests and a cup holder are standard features on the C CR machines.

Automatic two speed function. Improves machine manoeuvrability around site. Increasing productivity by balancing high speed requirements with control.

Joystick mounted auxiliary and boom swing functions. The new joystick mounted position of these functions gives “finger tip” control and a clear cab floor.



Work Tools

Caterpillar's range of buckets and hydraulically powered tools, matched to optimize machine performance.

Caterpillar offers a wide range of work tools to increase the machines versatility even further.

These tools are designed to get the best out of the machine and deliver excellent value through high productivity and long life.

Tools on offer include:

- Digging Buckets
- Ditch Cleaning Buckets
- Angling Ditching Buckets
- Hydraulic Hammers
- Augers

Mechanical Quick Coupler. The Caterpillar Quick Coupler makes tool changes fast and easy. Maximizing performance and compatible with all standard work tools.

2nd auxiliary circuit. Work tools versatility is further enhanced with the option of a second additional auxiliary supply.



Serviceability

Good access to main check points and major components makes servicing and maintaining the 304C CR easier.

Swing out rear door. Provides access to major components and service points:

- Engine oil check and fill
- Vertically mounted engine oil filter
- Starter motor
- Alternator

Lifting side hood. Allows excellent access to:

- Air filter
- Main implement valve
- Auxiliary change over valve
- Accumulator
- Fuel filter
- Hydraulic tank

S•O•SSM oil sampling valve. Allows easy sampling of the hydraulic fluid for preventative maintenance.

“Side by side” radiator and oil cooler. Simplifies cleaning and reduces maintenance times with greater accessibility.

500 hour oil and filter change period. Reduces operating costs and machine down time.



Customer Support

Complete services provided by the world's largest dealer network.

Unmatched dealer support. Excellent equipment management services and fast parts availability – most within 24 hours – provide maximum uptime and minimum repair costs.

Equipment maintenance services. Help optimize machine performance and reliability. Services include:

- Customer Support Agreements
- S•O•S oil analysis
- Maintenance contracts
- Scheduled technical inspections

Equipment management services.

To help optimize profits services include:

- Machine and work tool selection
- Rental and leasing
- Purchasing and financing
- Owning and operating cost management
- Extended warranties

For a complete explanation of these services please call your local Caterpillar dealer.



Engine

Mitsubishi S4Q2. Watercooled, 4 stroke, 4 cylinder diesel engine.

Ratings at 2400 rpm

Gross power	32.2 kW	43.8 hp
Net power	31.0 kW	42.2 hp

Dimensions

Bore	88 mm
Stroke	103 mm
Displacement	2.5 l

- All engine horsepower (hp) are metric including front page.
- Net power rating per ISO 9249 and 80/1269/EEC
- Meets EU Stage II emission requirements

Weights*

	kg	kg
Canopy	4635	**4800
Cab	4755	**4920

* With standard bucket, operator, full fuel and auxiliary lines, weight varies depending on machine configuration.

** With 165 kg extra counterweight.

Undercarriage

H-shaped, fabricated frame.

- Fabricated design gives high durability
- Tapered roller frame reduces accumulation of material in the tracks
- Track tension adjustment is accomplished through grease-filled cylinders
- Track shoe width is 400 mm for both standard rubber and optional steel tracks
- Ground clearance is 340 mm

Hydraulic System

Pumps/Pressures/Circuits

Single variable displacement piston pump 119 l/min at 2400 rpm

Operating pressures

Equipment	245 bar
Travel	245 bar
Swing	176 bar

Auxiliary circuits

Primary	70 l/min at 245 bar
Secondary	35 l/min at 184 bar

Digging Forces

Stick, standard	24.7 kN
Stick, long	21.3 kN
Bucket	44.7 kN

Service Refill Capacities

	Liters
Cooling system	11
Engine oil	7
Fuel tank	72
Hydraulic tank	48
Hydraulic system	78

Blade

Blade is full width of the machine.

	mm
Width	1980
Height of blade	375
Dig depth	540
Lift height	420

- Blade flotation function provides easier operation
- Replaceable, hardened, wear resistant cutting edge

Travel System

Travel speed

High	4.6 km/h
Low	2.6 km/h

Traction force

High Speed	23.0 kN
Low Speed	44.6 kN

Gradeability 30°

- Each track is driven by one independent 2-speed motor
- Drive modules are integrated into the roller frame for total protection
- Straight line travel when tracking and operating the front linkage simultaneously

Swing System

Machine swing speed 9 rpm

Boom swing system with cast swing post

Left (without stop)	80°
Left (with stop)	60°
Right	50°

- Automatic swing brake, spring applied, hydraulic release
- Centralized lubrication

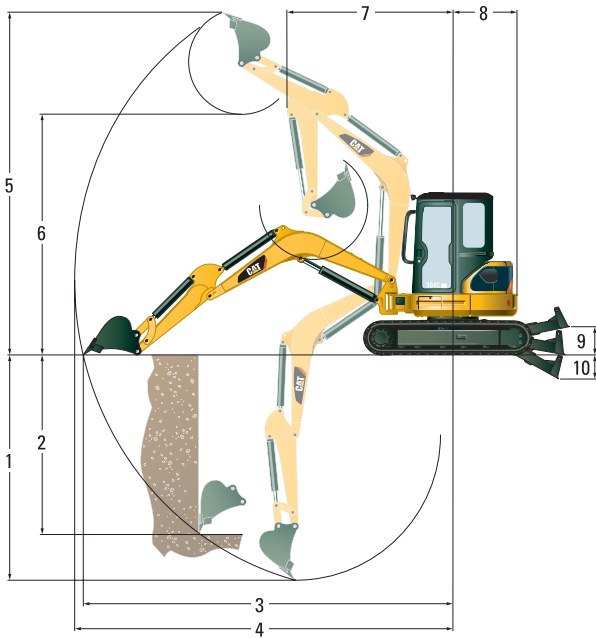
Electrical System

- 50 A alternator
- 12 V, 52 Ah, 650 CCA maintenance free battery
- Sealed electrical connectors

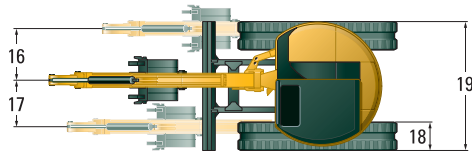
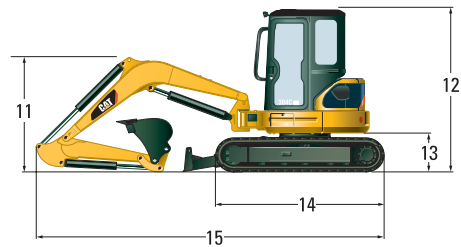
Sound Levels

Operator sound pressure level is 80 dB(A) for cab and 78 dB(A) for canopy builds when measured per ISO 6396 (dynamic). Machine sound power measured per 2000/14/EC is 96 dB(A).

Dimensions and Lift Capacities



Track and blade width	1980 mm
Gauge width	1580 mm
Shoe width	400 mm



	Sticks	
	Standard mm	Long mm
1	3300	3690
2	2440	2760
3	5460	5830
4	5630	5990
5	5280	5480
6	3690	3900
7	2350	2530
8	990	990
9	420	420
10	540	540
11	1730	2100
12	2550	2550
13	615	615
14	2580	2580
15	5170	5290
16	785	785
17	695	695
18	400	400
19	1980	1980

Lift Point Radius	mm	Over front		Over side	
		3000	5130		
Blade down	kg	*2340	1020	*790	450
Blade up	kg	1200	900	520	400

With tracks level on the ground

* Limited by hydraulic capacity rather than tipping load.

The above loads are in compliance with SAE hydraulic excavator lift capacity rating standard SAE J1097 and they do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity.

The excavator bucket weight is not included on this chart. Lifting capacities for standard stick.

Standard Equipment

Standard equipment may vary. Consult your Caterpillar dealer for specifics.

- Adjustable wrist rests
- Alternator 50 A
- Automatic swing park brake
- Auxiliary hydraulic circuit valve, controls and 1 way hammer lines to the stick, 2 way (auger) auxiliary hydraulic lines to the stick
- Auxiliary line quick couplers
- Boom cylinder guard
- Cab mounted work light
- Canopy with FOPS ISO10262 (Level 1) and Tip-Over protection ISO12117
- Coat hook and cup holder
- Dial type accelerator
- Dozer blade with float function
- Floor mat
- Gauges or indicators for fuel level, engine coolant temperature, service hours, engine oil pressure, air cleaner, alternator, glow plugs, service interval
- Horn
- Hydraulic oil cooler
- Lockable storage box
- Low maintenance linkage pin joints
- Maintenance free battery
- Rubber track
- Seatbelt, 50 mm
- Standard stick
- Suspension seat, vinyl covered
- Travel pedals
- Two speed travel

Optional Equipment

Optional equipment may vary. Consult your Caterpillar dealer for specifics.

- Air conditioning
- Additional auxiliary lines
- Additional counterweight 165 kg
- Biodegradable hydraulic oil
- Boom check valve
- Boom mounted light
- Cab, fully glazed with FOPS ISO10262 (Level 1) and Tip-Over Protection ISO 12117 with heater/defroster, interior light and windshield wiper/washer
- Control pattern changer
- Ecology drain valve for hydraulic tank
- Ecology drain valve for engine oil
- Fan and sun blind installation
- Front screen guard for cab and canopy
- Immobilizer system
- Long stick
- Mechanical quick coupler
- Mirrors for cab and canopy
- Radio installation kit
- Factory fitted radio/CD player
- Seatbelt, 75 mm
- Steel tracks
- Suspension seat, fabric covered
- High back suspension seat, fabric covered
- 'Thumb ready' sticks
- Tool kit
- Travel alarm
- Work tools

304C CR Mini Hydraulic Excavator

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 Caterpillar dealer for available options.

© 2006 Caterpillar -- All rights reserved

CAT, CATERPILLAR, their respective logos, "Caterpillar Yellow" and the POWER EDGE trade dress as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.

HEHH3371-1 (12/2006) hr

CATERPILLAR[®]

Courtesy of MachineMarket