

# 304C CR

## Mini Hydraulic Excavator



### Engine

<b>Model</b>	<b>Mitsubishi S402</b>	
<b>Rated net power (ISO 9249)</b>	<b>31 kW</b>	<b>42 hp</b>

### Weights

<b>Operating weight with canopy</b>	<b>4800 kg</b>	<b>10,582 lb</b>
<b>Operating weight with cab</b>	<b>4920 kg</b>	<b>10,844 lb</b>

- **Weight with counterweight, rubber tracks, bucket, operator, full fuel and auxiliary lines.**
- **Weight varies depending on machine configuration.**

# 304C CR Mini Hydraulic Excavator

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

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## Comfort and Ease of Operation

Cab or Canopy, the 304C CR offers a spacious and comfortable work area with expansive legroom. Compact radius design gives greater machine versatility and the capability to work within confined areas. **pg. 4**

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## Performance and Versatility

High dig forces, fast cycle times and high bucket rotation angles deliver the productivity that customers demand. A choice of stick lengths and Cat® Work Tools makes the 304C CR even more versatile. **pg. 5**

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## Low Operating Costs

Robust, reliable and easily serviced are key attributes of the C Series CR design. Service points are easily accessed through rear door and side cover and a 500-hour engine oil change period lowers operating costs. **pg. 6**

*Powerful performance levels in a compact radius machine. The 304C CR delivers high productivity in the tightest applications.*



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### **Angle Blade Configuration**

The versatility and productivity of the Cat C Series machine can be increased even further by ordering the hydraulic angling dozer blade configuration. **pg. 7**

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### **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. **pg. 8**



## Comfort and Ease of Operation

*Class leading space and top level features 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.

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

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

**Sliding Cab Door.** The sliding door system offers good access and maintains the machine's 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.

### **Automatic Two Speed Function.**

Improves machine maneuverability around the job site. Increased productivity by balancing high speed travel requirements with controllability.

### **Joystick Mounted Auxiliary and Boom Swing Functions.**

The new joystick mounted position of these functions gives "fingertip" control and a clear cab floor.

**Compact Radius Design.** Compact radius design gives greater machine versatility and the 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 done without having to worry about the back of the machine.

### **High Level of Standard Comfort**

**Features.** Reclining suspension seat, power point, adjustable wrist rests and a cup holder are standard features on the Cat C CR machines.

## Performance and Versatility

*The range of Cat buckets and hydraulically powered tools are machine matched to optimize performance.*

**Fast, Powerful Digging..** High digging forces and fast cycle times through smooth responsive hydraulics, ensure that the Cat C Series CR machines deliver the productivity that customers demand.

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

**Dozer Blade Float Function.** The dozer float enables easy ground levelling for landscaping and finishing applications, as well as more efficient site clean-up.

**Stick Options.** A choice of standard or long stick enables matching of machine to application.

### **Hydraulic 'Thumb Ready' Sticks.**

All Cat CR C Series machines come standard with stick mounted brackets, ready to fit a hydraulic thumb.



### **Auxiliary Lines and Connectors.**

The auxiliary lines and connectors including quick connections are fitted as standard, meaning the Cat 304C CR comes ready to work. Hammer (one-way) and auger (two-way) auxiliary lines are also fitted as standard.



**Mechanical Quick Coupler.** The Cat Quick Coupler makes tool changes fast and easy. It maximizes performance as it is compatible with all standard work tools.

Work Tools versatility is further enhanced with the option of a second additional auxiliary supply.



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

**Wide Range of Work Tools.** These tools are designed to get the best out of the machine and deliver excellent value through high productivity and long life. Tools include:

- Digging buckets
- Ditch cleaning buckets
- Angling ditching buckets
- Hydraulic hammers
- Augers



## Low Operating Costs

*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

**S•O•S<sup>SM</sup> 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.

**Automatic Engine Idle.** Automatically lowers engine revs when not in use to conserve fuel and lower environmental noise/emissions.

**Lifting Side Hood.** Allows excellent access to:

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

**500 Hour Oil and Filter Change Period.**

Reduces operating costs and machine down time.

**Front Linkage.** Protected front linkage lines are routed above the boom and stick to help reduce damage and downtime.

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

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

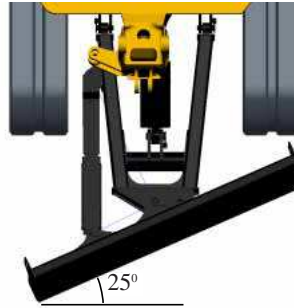
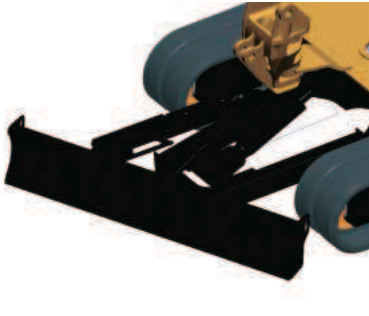
# Angle Blade Configuration

*Increased versatility and productivity are offered with the Cat angle blade.*

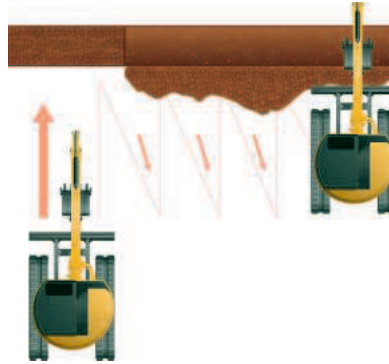


**Versatility and Productivity.** The Cat C Series machine can be made even more productive by ordering the angle dozer blade configuration.

**Strong and Durable.** The Cat hydraulic angle blade is engineered to be strong and durable with a hardened steel wear edge and good protection to cylinders and hydraulic lines.



**Angle Blade Positioning.** The angle blade can be positioned straight ahead or angled up to 25 degrees to the left or right reducing the number of times required to back-up and reposition when backfilling thus reducing operation time.



**Single Control Lever.** All dozer functions are controlled from inside the cab, with fully proportional fingertip control to position the blade at any angle, from the start to 25 degrees left or right while travelling in either direction.

**Full Pilot Control.** Full pilot control means no cables or linkages to wear, keeping "as new" controllability throughout the machines life and reducing maintenance costs.

**Load Sensing Hydraulics, High Traction Force and Auto 2-Speed Travel.**

These features are standard on the Cat C Series CR machines and ideally suited for getting the best out of the angling blade installation.

**Excellent Blade Visibility.** The compact radius design of the Cat C Series machines gives excellent visibility to the blade in any position, allowing the blade to be positioned behind the operator and away from the front linkage for better access when back dragging and finishing in tight areas.

## Customer Support

*Industry-leading customer support is provided by the Cat dealer network.*



**Selection.** Make detailed comparisons of the machines under consideration before you purchase. Your Cat dealer can give you precise answers to your questions, as well as estimate component life, preventive maintenance cost and the true cost of lost production.

**Purchase.** Look past initial price. Consider the flexible financing options available, as well as day-to-day operating costs. Look at dealer services that can be included in the cost of the machine to yield lower equipment owning and operating costs over the long haul. Your Cat dealer can provide a package to meet your needs.

**Operation.** Improving operating techniques can boost your profits. Your Cat dealer has training literature, video tapes, classes and other ideas to help increase your productivity.

### **Equipment Maintenance Services.**

More and more equipment buyers are planning for effective maintenance before buying. Choose from your dealer's wide range of maintenance services at the time you purchase your new machine. Repair option programs guarantee the cost of repairs up front. Services that help optimize machine performance include:

- Customer Support Agreements
- S•O•S<sup>SM</sup> and Coolant Sampling and Technical Analysis
- Maintenance contracts
- Scheduled technical inspections

**Unmatched Product Support.** You will find nearly all parts at our dealer parts counter. Cat dealers use a world-wide computer network to find in-stock parts to minimize machine downtime.

Save money with genuine Cat Remanufactured parts. You receive the same warranty and reliability as new products at a cost savings of 40-70 percent.

**SAFETY.CAT.COM<sup>TM</sup>.**



## Engine

Model	Mitsubishi S4Q2	
Rated net power (ISO 9249)	31 kW	42 hp
Gross power	32 kW	43 hp

- Net power rating per ISO 9249 and EEC 80/1269
- Meets U.S. EPA Interim Tier 4 emission regulations

## Weights

Operating weight with canopy	4800 kg	10,582 lb
Operating weight with cab	4920 kg	10,844 lb

- Weight with counterweight, rubber tracks, bucket, operator, full fuel and auxiliary lines.
- Weight varies depending on machine configuration.

## Engine Dimensions

Bore	88 mm	3.45 in
Stroke	103 mm	4.05 in
Displacement	2.505 L	153 in <sup>3</sup>

## Travel System

Travel speed – high	4.6 km/h	2.8 mph
Travel speed – low	2.6 km/h	1.6 mph
Max traction force – high speed	23 kN	5,170.6 lb
Max traction force – low speed	44.6 kN	10,027 lb
Gradeability (max) – high	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

## Service Refill Capacities

Cooling system	11 L	2.90 gal
Engine oil	7 L	1.85 gal
Fuel tank	72 L	19.02 gal
Hydraulic tank	48 L	12.7 gal
Hydraulic system	78 L	20.6 gal

## Hydraulic System

Load sensing hydraulics with variable displacement pump		
Pump flow at 2400 RPM	119 L/min	31.4 gal/min
Operating pressures – equipment	245 bar	3,553 psi
Operating pressure – travel	245 bar	3,553 psi
Operating pressure – swing	176 bar	2,552 psi
Auxiliary circuit – Primary	70 L/min	18.5 gal/min
(186 bar/2,734 psi)		
Auxiliary circuits – Secondary	35 L/min	9.25 gal/min
(174 bar/2,524 psi)		
Digging forces – stick (standard)	24.7 kN	5,550 lb
Digging force – stick (long)	21.3 kN	4,788 lb
Digging force – bucket	44.7 kN	10,050 lb

## Swing System

Machine swing speed	9 RPM
Boom swing – left (without stop)	80°
Boom swing – left (with stop)	60°
Swing – right	50°

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

## Sound Levels

Canopy	78 dB(A)
Cab	80 dB(A)

- Operator sound pressure levels measured per ISO 6396 (dynamic).

## Electrical System

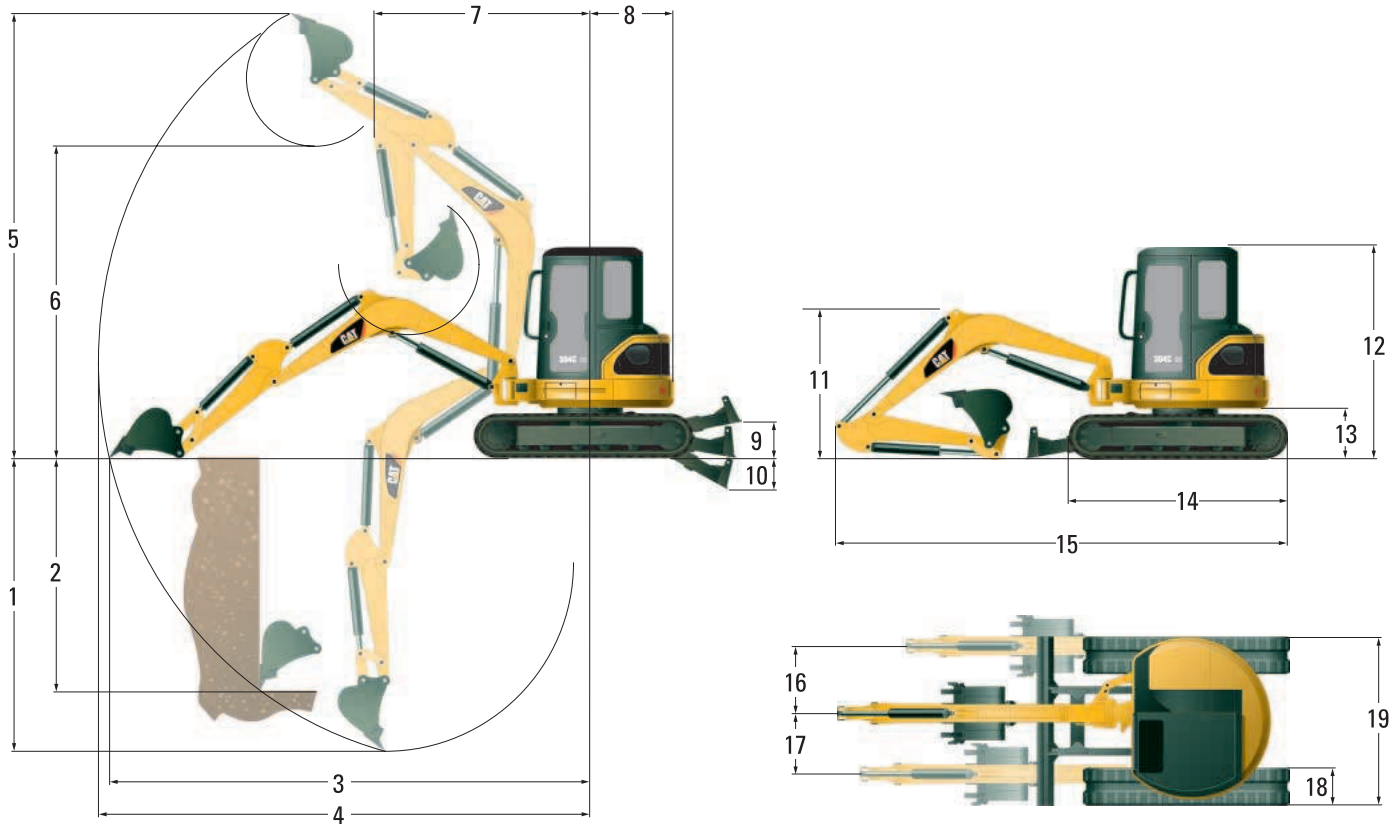
- 50-amp alternator
- 12-volt, 650 CCA, 52 amp/h maintenance-free battery
- Sealed electrical connectors

## Blade

Width	1980 mm	77.95 in
Height	375 mm	14.75 in
Dig depth	540 mm	21.25 in
Lift height	420 mm	16.55 in

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

# Dimensions and Lift Capacities



	Standard Stick		Long Stick	
<b>1</b>	3300 mm	10'10"	3690 mm	12'1"
<b>2</b>	2440 mm	8'0"	2760 mm	9'1"
<b>3</b>	5460 mm	17'11"	5830 mm	19'2"
<b>4</b>	5630 mm	18'6"	5990 mm	19'8"
<b>5</b>	5280 mm	17'4"	5480 mm	18'0"
<b>6</b>	3690 mm	12'1"	3900 mm	12'10"
<b>7</b>	2350 mm	7'9"	2530 mm	8'4"
<b>8</b>	1070 mm	3'6"	1070 mm	3'6"
<b>9</b>	420 mm	1'5"	420 mm	1'5"
<b>10</b>	540 mm	1'9"	540 mm	1'9"

	Standard Stick		Long Stick	
<b>11</b>	1730 mm	5'8"	2100 mm	6'11"
<b>12</b>	2550 mm	8'4"	2550 mm	8'4"
<b>13</b>	615 mm	2'0"	615 mm	2'0"
<b>14</b>	2580 mm	8'6"	2580 mm	8'6"
<b>15</b>	5170 mm	17'0"	5290 mm	17'4"
<b>16</b>	785 mm	2'7"	785 mm	2'7"
<b>17</b>	695 mm	2'3"	695 mm	2'3"
<b>18</b>	400 mm	1'4"	400 mm	1'4"
<b>19</b>	1980 mm	6'6"	1980 mm	6'6"

With tracks level on the ground.

Track and blade width	1980 mm	6'6"
Gauge width	1580 mm	5'2"
Shoe width	400 mm	1'4"

## Lift Capacities at Ground Level

	Over Front		Over Side		Over Front		Over Side	
Lift point radius	3000 mm	9'11"	3000 mm	9'11"	5130 mm	16'10"	5130 mm	16'10"
Blade down	2340 kg*	5,160 lb*	1020 kg	2,249 lb	790 kg*	1,742 lb*	450 kg	992 lb
Blade up	1200 kg	2,646 lb	900 kg	1,985 lb	520 kg	1,147 lb	400 kg	882 lb

\*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 details.*

Additional counterweight 165 kg (364 lb)  
Adjustable wrist rests  
Alternator  
Automatic Engine Idle  
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  
Control pattern changer  
Dial type accelerator  
Dozer blade with float function  
Floor mat  
Foot travel pedals

Gauges or indicators for fuel level engine  
coolant temperature, hour meter, engine oil pressure,  
air cleaner, alternator and glow plugs, service interval  
Horn  
Hydraulic oil cooler  
Lockable storage box  
Low maintenance linkage pin joints  
Maintenance-free battery  
Rubber track  
Retractable seat belt  
Standard stick  
Suspension seat, vinyl covered  
'Thumb ready' sticks  
Travel alarm  
Two speed travel

## Optional Equipment

*Optional equipment may vary. Consult your Caterpillar dealer for details.*

Air conditioning  
Additional auxiliary lines  
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  
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  
Seat belt, 75 mm (3 in) wide  
Suspension seat, fabric covered  
High back suspension seat, fabric covered  
Tool kit  
Work tools

# 304C CR Mini Hydraulic Excavator

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Replaces: AEHQ5682-02

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