

# 303C CR

## Mini Hydraulic Excavators



### Engine

Model	Mitsubishi S302	
Rated net power (ISO 9249)	22 kW	30 hp

### Weights

Operating weight with canopy	3435 kg	7,575 lb
Operating weight with cab	3555 kg	7,835 lb

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

# 303C CR Mini Hydraulic Excavators

*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 303C 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 303C 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 the 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 Cat 303C 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 feature 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 is achieved 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 303C CR come 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 tool versatility is further enhanced with the option of a second additional auxiliary supply.



**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

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



## Low Operating Costs

*Good access to main check points and major components makes servicing and maintaining the 303C 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.

**500 Hour Oil and Filter Change Period.** Reduces operating costs and machine down time.

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

- Air filter
- Main implement valve
- Auxiliary change over valve
- Accumulator
- Fuel filter
- Hydraulic tank
- Radiator and oil cooler

**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.

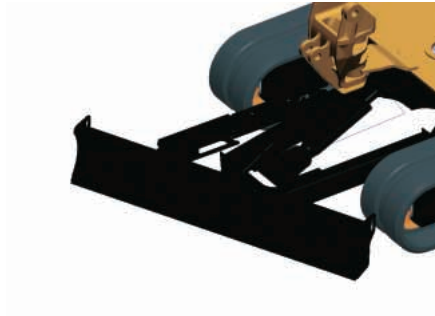
# Angle Blade Configuration

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

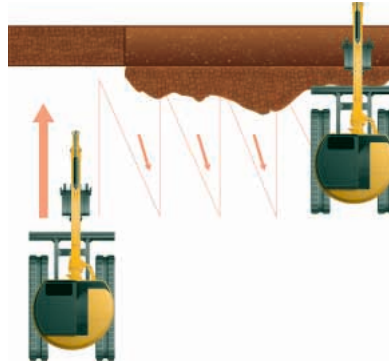


**Versatility and Productivity.** The Cat C Series machine can be made even more productive by ordering the angle dozer blade configuration.

**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.

## Engine

Model	Mitsubishi S3Q2	
Rated net power (ISO 9249)	22 kW	30 hp
Gross power	23 kW	31 hp

- Net power rating per ISO 9249 and EEC 80/1269
- Meets U.S. EPA Tier 2 emission regulations

## Weights

Operating weight with canopy	3435 kg	7,575 lb
Operating weight with cab	3555 kg	7,835 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	1.9 L	116 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	17.7 kN	3,979 lb
Max traction force – low speed	33.4 kN	7,508 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	6 L	1.6 gal
Engine oil	6 L	1.6 gal
Fuel tank	45 L	11.9 gal
Hydraulic tank	37 L	9.75 gal
Hydraulic system	65 L	17.2 gal

## Hydraulic System

Load sensing hydraulics with variable displacement pump		
Pump flow at 2300 RPM	85 L/min	22.5 gal/min
Operating pressures – equipment	245 bar	3,553 psi
Operating pressure – travel	245 bar	3,553 psi
Operating pressure – swing	172 bar	2,495 psi
Auxiliary circuit – Primary (245 bar/3,553 psi)	60 L/min	15.85 gal/min
Auxiliary circuits – Secondary (174 bar/2,524 psi)	27 L/min	7.15 gal/min
Digging forces – stick (standard)	18.9 kN	4,250 lb
Digging force – stick (long)	16.9 kN	3,799 lb
Digging force – bucket	33.0 kN	7,420 lb

## Swing System

Machine swing speed	9 RPM
Boom swing – left (without stop)	80°
Boom swing – left (with stop)	55°
Swing – right	50°

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

## Sound Levels

Canopy	78 dB(A)
Cab	82 dB(A)

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

## Electrical System

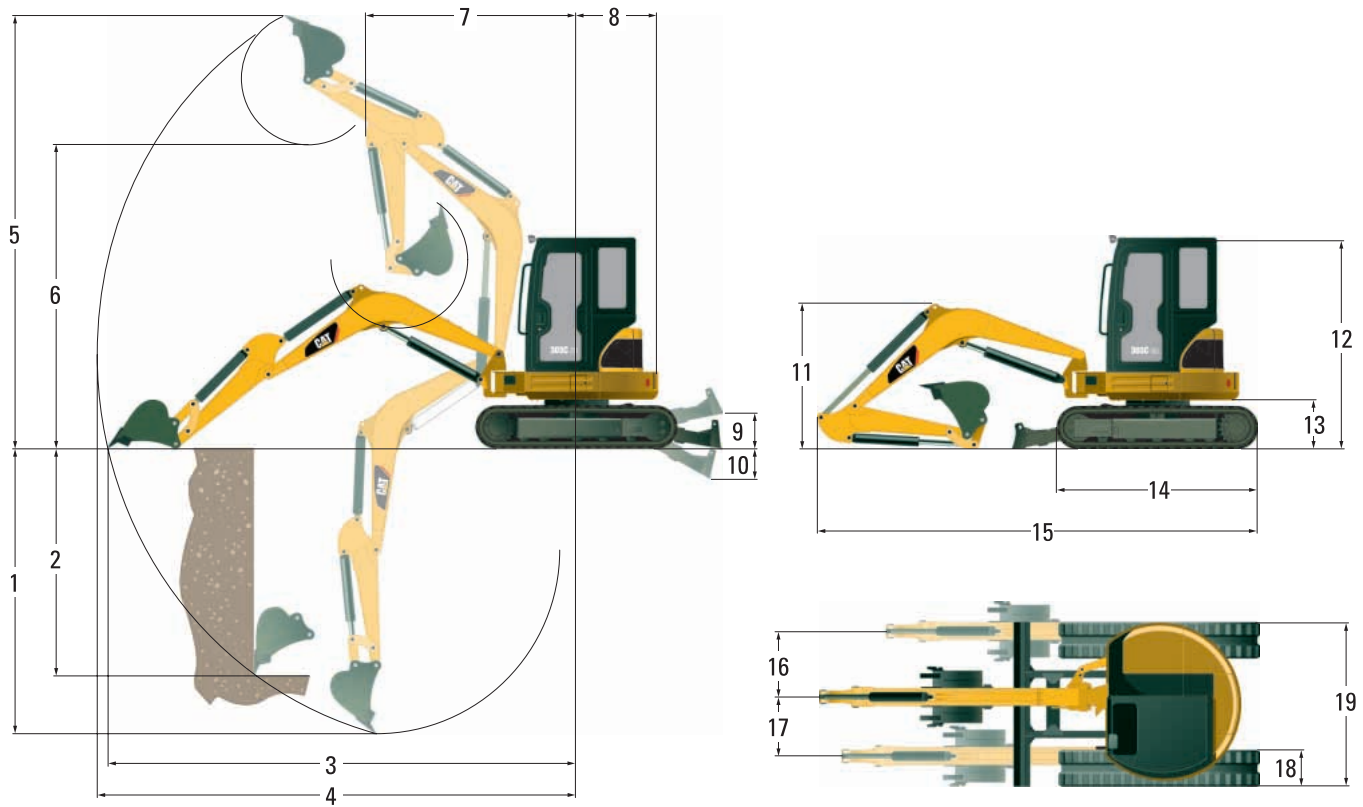
- 50-amp alternator
- 12-volt, 650 CCA, 52 amp/h maintenance-free battery
- Sealed electrical connectors

## Blade

Width	1550 mm	61.0 in
Height	325 mm	12.8 in
Dig depth	470 mm	18.5 in
Lift height	400 mm	15.8 in

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

# Dimensions and Lift Capacities



	Standard Stick		Long Stick	
<b>1</b>	2910 mm	9'7"	3200 mm	10'5"
<b>2</b>	2400 mm	7'10"	2550 mm	8'4"
<b>3</b>	5100 mm	16'9"	5350 mm	17'7"
<b>4</b>	5230 mm	17'2"	5470 mm	17'11"
<b>5</b>	4950 mm	16'3"	5060 mm	16'7"
<b>6</b>	3490 mm	11'5"	3610 mm	11'10"
<b>7</b>	2060 mm	6'9"	2180 mm	7'2"
<b>8</b>	890 mm	2'11"	890 mm	2'11"
<b>9</b>	400 mm	1'4"	400 mm	1'4"
<b>10</b>	470 mm	1'7"	470 mm	1'7"

	Standard Stick		Long Stick	
<b>11</b>	1340 mm	4'5"	1450 mm	4'9"
<b>12</b>	2500 mm	8'2"	2500 mm	8'2"
<b>13</b>	565 mm	1'10"	565 mm	1'10"
<b>14</b>	2220 mm	7'3"	2220 mm	7'3"
<b>15</b>	4740 mm	15'6"	4770 mm	15'8"
<b>16</b>	770 mm	2'6"	770 mm	2'6"
<b>17</b>	660 mm	2'2"	660 mm	2'2"
<b>18</b>	300 mm	1'0"	300 mm	1'0"
<b>19</b>	1550 mm	5'1"	1550 mm	5'1"

With tracks level on the ground.

Track and blade width	1550 mm	5'1"
Gauge width	1250 mm	4'1"
Shoe width	300 mm	1'0"

Lift Capacities at Ground Level	Over Front		Over Side		Over Front		Over Side	
	Lift point radius	3000 mm	9'8"	3000 mm	9'8"	4800 mm	15'9"	4800 mm
Blade down	1410 kg*	3,109 lb*	480 kg	1,058 lb	620 kg*	1,367 lb*	240 kg	529 lb
Blade up	650 kg	1,433 lb	440 kg	970 lb	320 kg	706 lb	210 kg	463 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.

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## Standard Equipment

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

Additional counterweight 165 kg (364 lb)  
Adjustable wrist rests  
Alternator  
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 seatbelt  
Standard stick  
Suspension seat, vinyl covered  
'Thumb ready' sticks  
Travel alarm  
Two speed travel

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## 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  
Seatbelt, 75 mm (3 in) wide  
Suspension seat, fabric covered  
High back suspension seat, fabric covered  
Tool kit  
Work tools

# 303C CR Mini Hydraulic Excavators

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