



Cat[®] 303.5E2 CR

MINI HYDRAULIC EXCAVATOR

FEATURES:

The Cat[®] 303.5E2 CR Mini Hydraulic Excavator delivers efficient performance, durability and versatility in a compact design to help you work in a variety of applications. The 303.5E2 CR features the following:

QUALITY

- The durable hoods and frame and the compact radius design of the 303.5E2 let you work comfortably and confidently in confined areas.
- The redesigned operator environment includes a high quality suspension seat, easy to adjust armrests and 100% pilot controls which offer consistent and long-lasting controllability.

EFFICIENCY

- High Definition Hydraulic System provides a load sensing and flow sharing capability leading to operational precision, efficient performance and greater controllability.
- Auto Idle allows the machine to automatically operate at a consistent lower engine speed when the hydraulics are not engaged for three seconds.

VERSATILITY

- Broad range of Cat Work Tools make the Cat Mini Excavator a versatile machine able to meet the requirements of any job site.
- Over 200 degrees of bucket rotation provides greater material retention during truck loading and easier flat wall digging without having to reposition the machine.

PERFORMANCE

- Smart Technology offers superior performance by collecting input from the machine and delivering the required power as output. This allows integration of a more fuel efficient engine while maintaining machine performance.
- COMPASS Control Panel is a standard feature that allows the operator to easily adjust auxiliary flows to achieve the optimal work tool performance, activate auto idle for improved fuel efficiency and utilize the security system to ensure protection of valuable assets with the simple touch of a button.

SERVICEABILITY

- Convenient service and maintenance requirements include ease of access to daily check points, 500 hour engine oil and filter change period, 50 hour grease interval on front implement, S-O-SSM oil sampling valve and overall long term durability.

SAFETY

- All Cat Mini Excavators from 3.5 metric tons to 10 metric tons are ROPS, TOPS and Top Guard Level 1 certified and include the Cat Interlock (hydraulic lockout) System, a certified accumulator which allows for auxiliary pressure to be released, and a travel alarm. All of these safety features are standard on the E2 model lineup.

Specifications

Engine

Engine Model*	Cat C1.7	
Rated Net Power @ 2,200 rpm		
ISO 9249/EEC 80/1269	17.5 kW	23.5 hp
Gross Power		
ISO 14396	18.5 kW	24.8 hp
Bore	87 mm	3.4 in
Stroke	92.4 mm	3.6 in
Displacement	1.7 L	104 in ³

*Meets U.S. EPA Tier 4 Final/EU Stage V emission standards.

Weights*

Weight – Canopy	3508 kg	7,734 lb
Weight – Cab	3692 kg	8,139 lb

*Weight includes counterweight, standard stick, rubber tracks, bucket, operator, full fuel and auxiliary lines.

Weight Increase from Minimum Configuration

Cab	184 kg	406 lb
Long Stick	31 kg	68 lb



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Swing System

Machine Swing Speed	9 rpm
Boom Swing – Left	80°
Boom Swing – Right	50°

*Automatic swing brake, spring applied, hydraulic release.

Travel System

Travel Speed – High	4.6 km/h	2.9 mph
Travel Speed – Low	3.2 km/h	2.0 mph
Maximum Traction Force – High Speed	17.0 kN	3,822 lb
Maximum Traction Force – Low Speed	31.1 kN	6,992 lb
Ground Pressure – Canopy	31.7 kPa	4.6 psi
Ground Pressure – Cab	32.1 kPa	4.7 psi
Gradeability (maximum)	30°	

Service Refill Capacities

Cooling System	5.5 L	1.5 gal
Engine Oil	7.0 L	1.8 gal
Fuel Tank	46 L	12.2 gal
Hydraulic Tank	42.3 L	11.2 gal
Hydraulic System	65 L	17.2 gal

Hydraulic System

Load Sensing Hydraulics with Variable Displacement Piston Pump		
Pump Flow at 2,200 rpm	100 L/min	26.4 gal/min
Operating Pressure – Equipment	245 bar	3,553 psi
Operating Pressure – Travel	245 bar	3,553 psi
Operating Pressure – Swing	216 bar	3,132 psi
Maximum Auxiliary Circuit – Primary		
Flow at Pump*	65 L/min	17.2 gal/min
Pressure at Pump*	186 bar	2,698 psi
Maximum Auxiliary Circuit – Secondary		
Flow at Pump*	25 L/min	6.6 gal/min
Pressure at Pump*	174 bar	2,524 psi

*Flow and pressure are not combinable. Under load, as flow rises pressure goes down.

Digging Force – Stick (standard)	18.9 kN	4,249 lb
Digging Force – Stick (long)	16.9 kN	3,799 lb
Digging Force – Bucket	33.0 kN	7,419 lb

Blade

Width	1780 mm	70.0 in
Height	325 mm	12.8 in
Dig Depth	470 mm	18.5 in
Lift Height	400 mm	15.7 in

Cab

Dynamic Operator Sound Pressure Level (ISO 6396:2008)	81 dB(A)
Exterior Sound Power Level (ISO 6395:2008)*	94 dB(A)

*European Union Directive “2000/14/EC.”

Certification – Cab and Canopy

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

Operating Specifications

Stick Length – Standard	1260 mm	50 in
Stick Length – Long	1560 mm	61 in
Machine Overhang	0 mm	0 in

Undercarriage

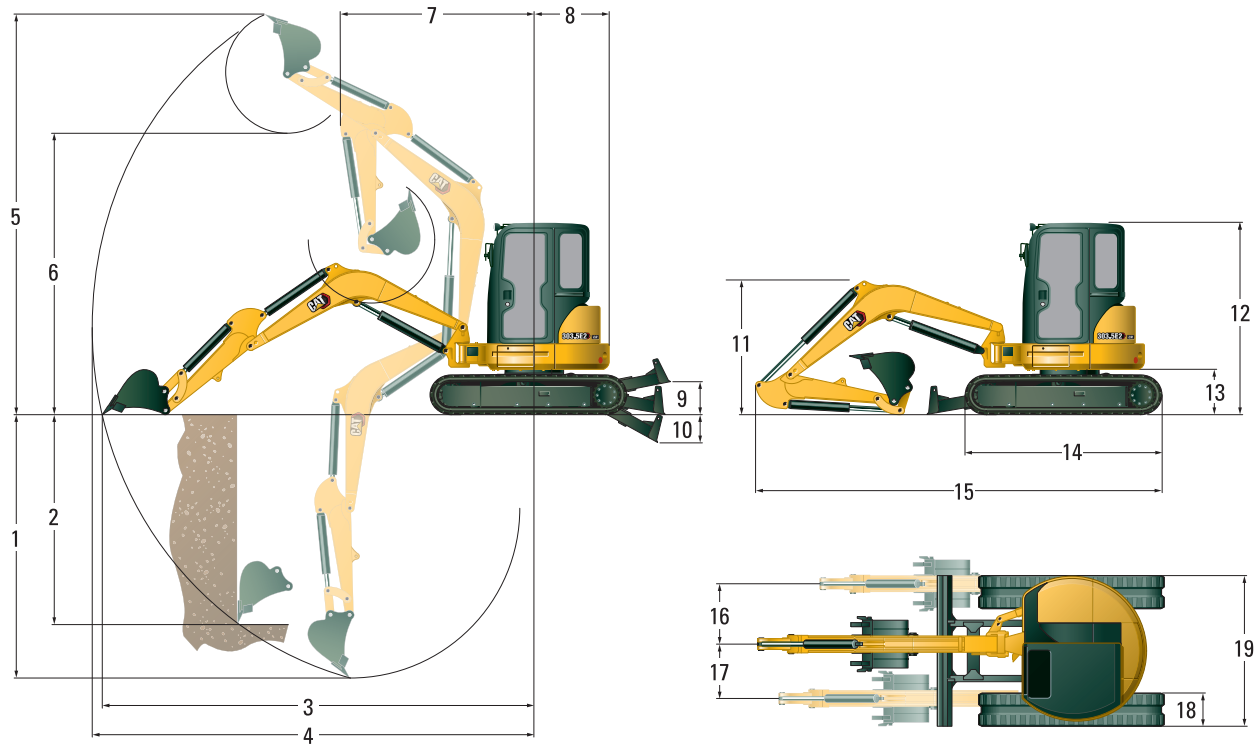
Number of Carrier Rollers	1
Number of Track Rollers	4
Track Roller Type	Center Flange

Lift Capacities at Ground Level*

Lift Point Radius		3000 mm (118 in)		4000 mm (157 in)	
		Front	Side	Front	Side
Blade Down	kg	1340	720	850	460
	(lb)	(2,955)	(1,588)	(1,874)	(1,014)
Blade Up	kg	750	660	470	420
	(lb)	(1,654)	(1,455)	(1,036)	(926)

*The above loads are in compliance with hydraulic excavator lift capacity rating standard ISO 10567:2007 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 are for long stick.

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Dimensions

	Standard Stick		Long Stick	
1 Dig Depth	2880 mm	113 in	3180 mm	125 in
2 Vertical Wall	2320 mm	91 in	2470 mm	97 in
3 Maximum Reach at Ground Level	5060 mm	199 in	5320 mm	209 in
4 Maximum Reach	5200 mm	205 in	5440 mm	214 in
5 Maximum Dig Height	4920 mm	194 in	5030 mm	198 in
6 Maximum Dump Clearance	3520 mm	139 in	3640 mm	143 in
7 Boom In Reach	2060 mm	81 in	2180 mm	86 in
8 Tail Swing	890 mm	35 in	890 mm	35 in
9 Maximum Blade Height	400 mm	16 in	400 mm	16 in
10 Maximum Blade Depth	470 mm	19 in	470 mm	19 in
11 Boom Height in Shipping Position	1420 mm	56 in	1650 mm	65 in
12 O/A Shipping Height	2500 mm	98 in	2500 mm	98 in
13 Swing Bearing Height	565 mm	22 in	565 mm	22 in
14 O/A Undercarriage Length	2220 mm	87 in	2220 mm	87 in
15 O/A Shipping Length	4730 mm	186 in	4790 mm	189 in
16 Boom Swing Right	765 mm	30 in	765 mm	30 in
17 Boom Swing Left	670 mm	26 in	670 mm	26 in
18 Track Belt/Shoe Width	300 mm	12 in	300 mm	12 in
19 O/A Track Width	1780 mm	70 in	1780 mm	70 in
Minimum Ground Clearance Below Undercarriage	0.0 mm	0.0 mm	0.0 mm	0.0 in
Stick Length	1260 mm	49.6 in	1560 mm	61.4 in

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STANDARD EQUIPMENT

ENGINE

- Cat C1.7 Tier 4 Final/EU Stage V diesel engine
- Automatic engine idle
- Automatic engine shut-off
- Automatic two speed travel
- Fuel and water separator
- Power on Demand

HYDRAULIC SYSTEM

- 1-way and 2-way (combined function)
- Accumulator
- Automatic swing parking brake
- Auxiliary hydraulic lines
- Adjustable auxiliary relief
- Auxiliary line quick disconnects
- Cat interlock system: hydraulic lockout
- Continuous auxiliary flow
- Ecology drain
- Hydraulic oil cooler
- High definition hydraulics
- Load sensing/flow sharing

TECHNOLOGY

- Product Link™

OPERATOR ENVIRONMENT

- 100% pilot control ergonomic joysticks
- Adjustable armrests
- COMPASS: complete, operation, maintenance, performance and security system
 - Multiple languages
- Cup holder
- Hydraulic neutral lockout bar
- Literature holder
- Site reference system: leveling
- Tool storage area
- Travel control pedals with hand levers
- Washable floor mat

UNDERCARRIAGE

- Dozer blade with float function
- Track, rubber belt, 300 mm (12 in) width
- Tie down eyes on track frame
- Towing eye on base frame

FRONT LINKAGE

- 200 degree bucket rotation
- Front shovel capable

ELECTRICAL

- 12 volt electrical system
- 60 ampere alternator
- 650 CCA maintenance free battery
- Fuse box
- Ignition key start/stop switch
- Slow blow fuse
- Warning horn

LIGHTS AND MIRRORS

- Boom light with time delay capability

SAFETY AND SECURITY

- Anti-theft system (compass)
- Caterpillar Corporate "One Key" System
- Door locks
- Lockable fuel cap
- Retractable seat belt
- Roll Over Protective Structure (ROPS) (ISO 12117-2)
- Tip Over Protective Structure (TOPS) (ISO 12117)
- Top guard – ISO 10262 (Level 1)
- Travel alarm

OPTIONAL EQUIPMENT

ENGINE

- Engine block heater

HYDRAULIC SYSTEM

- Quick coupler lines
- Boom lowering check valve
- Stick lowering check valve
- Secondary auxiliary hydraulic lines

OPERATOR ENVIRONMENT

- Cab:
 - Air conditioning
 - Heat
 - High back suspension seat
 - Interior light
 - Interlocking front window system
 - Radio
 - Windshield wiper

UNDERCARRIAGE

- Power angle blade
- Track, double grouser (steel), 300 mm (12 in)

FRONT LINKAGE

- Quick coupler: manual or hydraulic
- Thumb
- Thumb ready stick
- Buckets
- Certified lifting eye on bucket linkage
- Full range of performance matched work tools
 - Auger, hammer, ripper

LIGHTS AND MIRRORS

- Light, cab with time delay capability
- Mirror, canopy right
- Mirror, canopy left
- Mirror, cab rear

SAFETY AND SECURITY

- Battery disconnect
- Beacon socket
- Front wire mesh guard
- Rearview camera
- Vandal guard

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