



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 emission standards.

Weights*

| | | |
|---------------------------------|---------|----------|
| Weight – Canopy, Standard Stick | 3675 kg | 8,103 lb |
| Weight – Canopy, Long Stick | 3706 kg | 8,172 lb |
| Weight – Cab, Standard Stick | 3860 kg | 8,511 lb |
| Weight – Cab, Long Stick | 3891 kg | 8,580 lb |

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



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Swing System

| | |
|-----------------------------------|--------|
| Machine Swing Speed | 10 rpm |
| Boom Swing – Left (without stop)* | 80° |
| Boom Swing – Left (with stop)* | 55° |
| 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 | 30.1 kPa | 4.4 psi |
| Ground Pressure – Cab | 31.7 kPa | 4.6 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* | 60 L/min | 15.9 gal/min |
| Pressure at Pump* | 24 500 kPa | 3,553 psi |
| Maximum Auxiliary Circuit – Secondary | | |
| Flow at Pump* | 25 L/min | 6.6 gal/min |
| Pressure at Pump* | 24 500 kPa | 3,553 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)* | 95 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

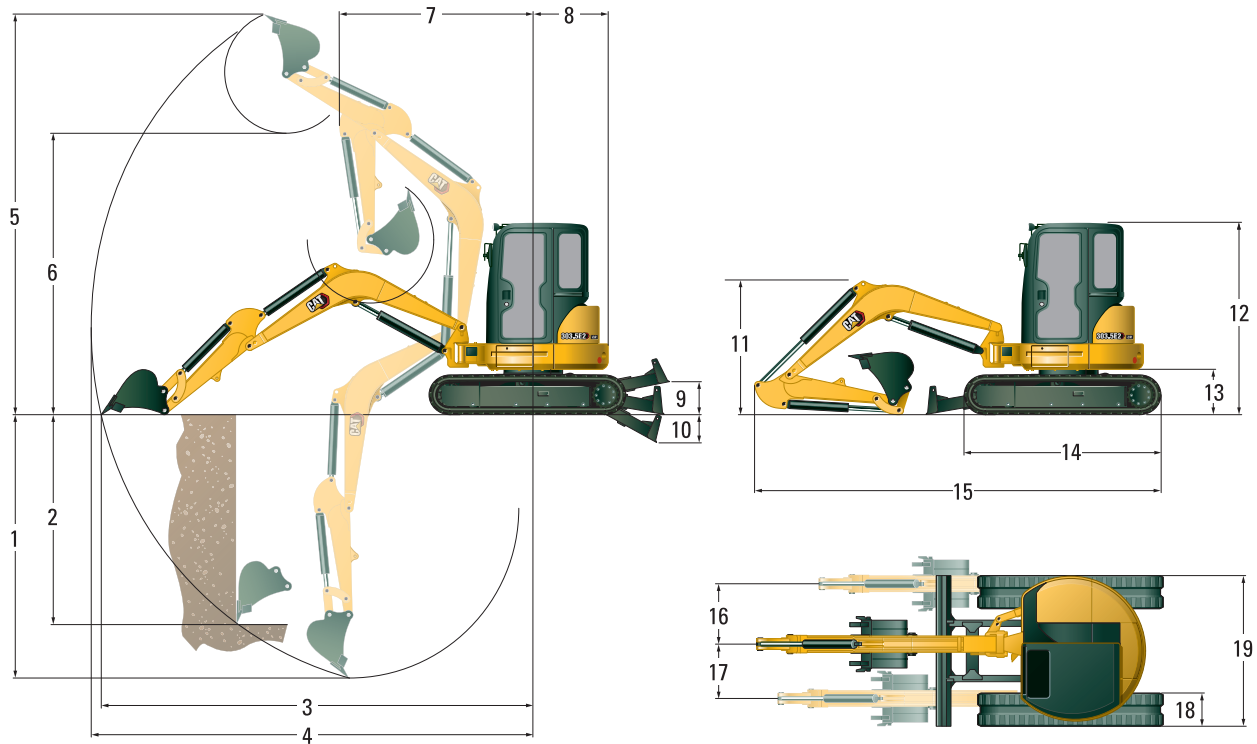
| | |
|---------------------------|---------------|
| Number of Carrier Rollers | 1 |
| Number of Track Rollers | 4 |
| Track Roller Type | Center Flange |

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 |

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STANDARD EQUIPMENT

ENGINE

- Cat C1.7 Tier 4 Final diesel engine
- Automatic engine idle
- Automatic engine shut-off
- Automatic two speed travel
- Fuel and water separator

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

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
- Certified lifting eye on bucket linkage
- Front shovel capable
- Thumb ready stick

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
- Buckets
- 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

TECHNOLOGY

- Product Link™

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