



Cat[®] 304E2 CR

MINI HYDRAULIC EXCAVATOR WITH SWING BOOM

FEATURES:

The Cat[®] 304E2 CR Mini Hydraulic Excavator delivers efficient performance, durability and versatility in a compact design to help you work in a variety of applications. The 304E2 CR features the following:

QUALITY

- The durable hoods and frame and the compact radius design of the 304E2 let you work comfortably and confidently in confined areas.
- The 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.
- Power on Demand provides optimal efficiency and performance the moment you need it. This automatic system ensures fuel efficiency through appropriate engine rating to meet all operational needs as required.

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

- Front shovel bucket orientation provides the operator with more ways to get the job done faster.
- 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 or economy mode for improved fuel efficiency and utilize the security system to ensure protection of valuable assets with the simple touch of a button.
- The Site Reference System included in the COMPASS monitor provides output from pitch and roll sensors to aid in grading and level trenching. This impacts accuracy and productivity for job site finishing.

SERVICEABILITY

- Convenient service and maintenance requirements include ease of access to daily check points, 500 hour engine oil and filter change period, 500 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 8 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, making connecting and disconnecting work tools safer and easier, and a travel alarm. All of these safety features are standard on the E2 model lineup (travel alarm optional in Europe).

Specifications

Engine

| | | |
|------------------------------------|----------|---------------------|
| Engine Model* | Cat C2.4 | |
| Rated Net Power @ 2,200 rpm | | |
| ISO 9249/EEC 80/1269 | 30 kW | 40.2 hp |
| Gross Power | | |
| ISO 14396 | 31.2 kW | 41.8 hp |
| Bore | 87 mm | 3.4 in |
| Stroke | 102.4 mm | 4 in |
| Displacement | 2.4 L | 146 in ³ |

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

Weights*

| | | |
|---------------------------------|---------|----------|
| Weight – Canopy, Standard Stick | 3925 kg | 8,655 lb |
| Weight – Canopy, Long Stick | 3955 kg | 8,721 lb |
| Weight – Cab, Standard Stick | 4050 kg | 8,930 lb |
| Weight – Cab, Long Stick | 4080 kg | 8,996 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)* | 70° |
| Boom Swing – Left (with stop)* | 55° |
| Boom Swing – Right | 50° |

*Automatic swing brake, spring applied, hydraulic release.

Travel System

| | | |
|-------------------------------------|----------|----------|
| Travel Speed – High | 5.2 km/h | 3.2 mph |
| Travel Speed – Low | 3.3 km/h | 2.1 mph |
| Maximum Traction Force – High Speed | 16.9 kN | 3,799 lb |
| Maximum Traction Force – Low Speed | 31.0 kN | 6,969 lb |
| Ground Pressure – Canopy | 28.1 kPa | 4.1 psi |
| Ground Pressure – Cab | 29.5 kPa | 4.3 psi |
| Gradeability (maximum) | 30° | |

Service Refill Capacities

| | | |
|------------------|--------|----------|
| Cooling System | 5.5 L | 1.5 gal |
| Engine Oil | 9.5 L | 2.5 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 |
| Auxiliary Circuit – Primary (186 bar/2,734 psi) | 70 L/min | 18.5 gal/min |
| Auxiliary Circuit – Secondary (174 bar/2,524 psi) | 25 L/min | 6.6 gal/min |
| Digging Force – Stick (standard) | 21.6 kN | 4,856 lb |
| Digging Force – Stick (long) | 19.5 kN | 4,384 lb |
| Digging Force – Bucket | 37.8 kN | 8,498 lb |

Blade

| | | |
|-------------|---------|---------|
| Width | 1950 mm | 76.8 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)* | 96 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 | 1315 mm | 52 in |
| Stick Length – Long | 1615 mm | 64 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*

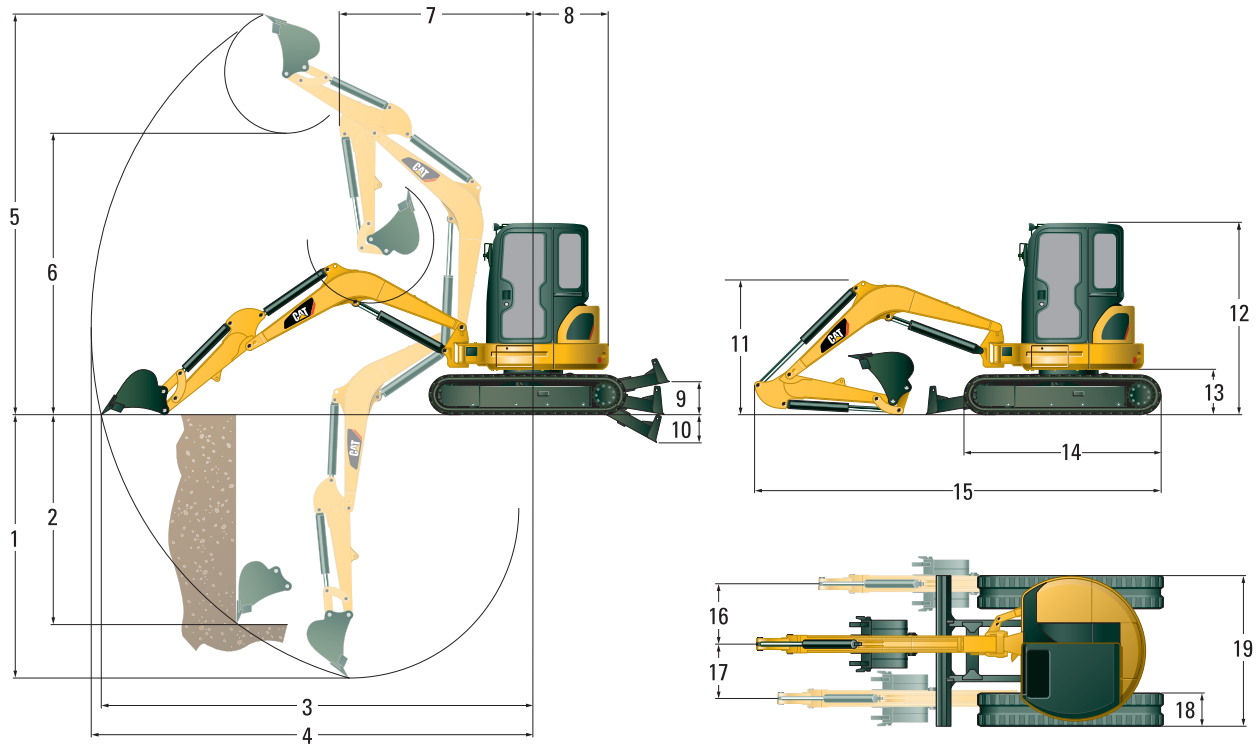
| Lift Point Radius | | 3000 mm (118 in) | | 4500 mm (177 in) | |
|-------------------|------|------------------|---------|------------------|---------|
| | | Front | Side | Front | Side |
| Blade Down | kg | 1570 | 910 | 860 | 480 |
| | (lb) | (3,462) | (2,007) | (1,896) | (1,058) |
| Blade Up | kg | 820 | 820 | 430 | 430 |
| | (lb) | (1,808) | (1,808) | (948) | (948) |

*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.

Air Conditioning System

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 1.0 kg of refrigerant which has a CO₂ equivalent of 1.4 metric tonnes.

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Dimensions

| | Standard Stick | | Long Stick | |
|--|----------------|--------|------------|--------|
| 1 Dig Depth | 3130 mm | 123 in | 3430 mm | 135 in |
| 2 Vertical Wall | 2420 mm | 95 in | 2560 mm | 101 in |
| 3 Maximum Reach at Ground Level | 5220 mm | 206 in | 5470 mm | 215 in |
| 4 Maximum Reach | 5350 mm | 211 in | 5590 mm | 220 in |
| 5 Maximum Dig Height | 4980 mm | 196 in | 5070 mm | 200 in |
| 6 Maximum Dump Clearance | 3590 mm | 141 in | 3690 mm | 145 in |
| 7 Boom In Reach | 2110 mm | 83 in | 2220 mm | 87 in |
| 8 Tail Swing | 975 mm | 38 in | 975 mm | 38 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 | 1480 mm | 58 in | 1770 mm | 70 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 | 4820 mm | 190 in | 4930 mm | 194 in |
| 16 Boom Swing Right | 735 mm | 29 in | 735 mm | 29 in |
| 17 Boom Swing Left | 670 mm | 26 in | 670 mm | 26 in |
| 18 Track Belt/Shoe Width | 350 mm | 14 in | 350 mm | 14 in |
| 19 O/A Track Width | 1950 mm | 77 in | 1950 mm | 77 in |

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STANDARD EQUIPMENT

ENGINE

- Cat C2.4 diesel engine (meets U.S. EPA Tier 4 Final emission standards for North America and EU Stage IIIA/Tier 4 Interim emission standards for all other regions)
- Automatic engine idle
- Automatic engine shut-off
- Automatic two speed travel
- Diesel Particulate Filter (North America only)
- Diesel Oxidation Catalyst (North America only)
- 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

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
- Pattern changer (optional in Europe)
- 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, 350 mm (14 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 (optional in Europe)
- 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 in Europe)

TECHNOLOGY

- Product Link™

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), 350 mm (14 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

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AEHQ7737-02 (03-2018)
Replaces AEHQ7737-01
(Global excluding
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