

# 305.5E2

Mini Hydraulic Excavator



## Engine

|                         |                   |
|-------------------------|-------------------|
| Engine Model            | Cat® C2.4 DI      |
| Net Power               | 31.1 kW (41.7 hp) |
| Gross Power @ 2,400 rpm | 34.1 kW (45.7 hp) |

## Weights

|                  |         |
|------------------|---------|
| Operating Weight | 5400 kg |
|------------------|---------|

## 305.5E2 Features

*The Cat 305.5E2 Mini Hydraulic Excavator in standard tail and side boom design delivers high performance with low fuel consumption in durable and reliable structure, to help you work in applications with high productivity but low operating cost.*

### Superior Efficiency

*Cat C2.4 efficient DI engine with high fuel efficiency.*

*High digging forces, fast cycle times, and excellent stability boosts your productivity.*

*Smooth new intuitive “High Definition Hydraulic” system provides the level of control demanded in any application with high hydraulic efficiency.*

*Blade is standard and with float function.*

### Stability

*Conventional tail swing design with an extended counterweight provides excellent stability while maximizing lifting.*

*Fixed side boom design provides additional stability at front and side while lifting and digging.*

### Durability and Reliability

*Heavy duty structural designs to ensure machine durability and reliability.*

### Maintenance

*Superior serviceability with the counterweight positioned low at the back and two big side doors, making all the maintenance points extremely easy to touch from ground level.*

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**Engineered to combine durable construction and reliable performance with low operating costs, the new Cat 305.5E2 mini hydraulic excavator has been designed and built by Caterpillar to deliver exceptional superior performance, productivity, controllability and reliability at lower operating cost. The extremely fast, smooth and responsive hydraulic movement offers greater job accuracy and efficiency. The standard tail swing design incorporates a counterweight that extends further back on the machine to maximize the machine stability for lifting and digging. The 305.5E2 sets the standard for conventional tail swing excavators in the five point five-ton size class.**

# Performance

Powerful digging combined with smooth control.



## Hydraulics

Smooth responsive hydraulics give the level of control demanded by the customer in any application, from fine grading and dozing to backfilling.

Powerful bucket and stick digging forces combined with fast cycle times result in world class productivity and performance.

Two speed function improves job site maneuverability with precise control by balancing travel speed with the torque needed for turning and traveling on inclines. Dozer blade float function enables easy ground leveling for landscaping and finish grade applications as well as more efficient job site clean-up.

## Stick and Boom

The front structure is designed to provide maximum digging capability using high tensile strength steel. All pins used in the front linkages have thick chrome plating to prevent pin galling and squealing for long pin and stick life. The diameter of each pin is made as large as possible to smoothly distribute the shear and side loads associated with the stick during tough digging jobs. The pin and low maintenance bushing arrangement reduces pin friction, extending the greasing interval.



## Lift Capacity

The new Cat E2 Series has industry leading lift capacity matched with outstanding stability. This provides the control required to meet the diverse and continually changing needs of the customer.

Fixed side boom design provides additional stability at front and side while lifting and digging.

## Steel Track

Caterpillar designed undercarriage is built for stability and durability. A 400 mm triple grouser track is standard. Lower profiled undercarriage provides better stability and lifting capability. Travel motors with two-speed capability and strong track drives provide high gradeability and turnability for various ground conditions. Split master link and sealed track rollers reduce owning and operating costs. Steel tracks provide optimum stability when lifting over the side.



## Undercarriage

Excellent stability.



### Dozer with Float Function

The dozer function is pilot controlled from inside the cab, providing smooth, proportional operation. The dozer float function is enabled by pushing the lever fully forward into the decent position. Site clean up and backfilling is easier as the operator does not have to adjust the blade height during travel.

# Operator Comfort

Simple, easy operation allows the operator to focus on production.



## Operator Station

The redesigned operator environment provides the operator with a larger cab and more ingress and egress room.

## Ease of Operation

Low effort, ergonomically designed pilot hydraulic levers provide full controllability. Maximum travel speed can be selected by easily accessible switch on the console.

## Comfortable Operator Station

The spacious cab provides a comfortable working environment for the operator.

- New engine air intake hose routing to lower the noise level inside the operator station
- New cab mounting – viscous cab mounting system
- Cab includes heater and air conditioner for maximum comfort in a range of climatic conditions
- Fully adjustable, reclining fabric high-back seat with headrest for greater comfort
- Floor mat with molded footrest to add to the overall utility of the cab
- Radio with two speakers and an antenna and auxiliary inputs (standard 12V AM/FM radio)



## Excellent Visibility

The 305.5E2 features excellent visibility to the work tool and machine surroundings.

- Assisted front window opens easily
- Removable lower front window
- Front window wiper and washer for a clear view
- Dozer blade is visible from all swing angles for maximum convenience

## 100% Pilot Controls

The standard enclosed cab has a tilt-up, hydraulic lockout lever, ensuring that the operator cannot leave the seat without disabling implement and drive-system hydraulics, providing added safety. Low effort pilot operated joystick levers allow precise control of implement hydraulic functions. Delivers excellent machine control with fine modulation and lifetime 'as new' performance.





# Engine

Clean, quiet, and efficient.

## Efficient Engine and Load Sensing Hydraulics

The 305.5E2 uses a fuel efficient Cat C2.4 DI engine with a net power rating of 31.1 kW (41.7 hp) and features a powerful load-sensing hydraulic system with standard auxiliary hydraulic valve section, to provide excellent digging performance and smooth control. Low noise and vibration levels deliver comfortable operation. The engine features a new direct injection fuel system that delivers optimum fuel efficiency.

## High Ambient Cooling

A high ambient temperature cooling system is standard featuring stacked coolers for a compact design.

## Cold Start Capability

Cat C2.4 DI engine is with cold start capacity as low as  $-15.7$  degrees.

## One Side Maintenance

The Cat C2.4 DI engine offers superior maintenance convenience with its large steel rear door and two big side doors for easy access to all major components and service points.



## Engine and Serviceability

Superior power with easy access and minimal maintenance requirements keep you working.

### Customer Support – Unmatched Support Makes the Difference

Your Cat dealer is ready to assist you with your purchase decision and everything after.

- Financing packages are flexible to meet your needs
- Unmatched parts availability keeps you working
- Make comparisons of machines, with estimates of component life, preventative maintenance and cost of production
- For more information on Cat products, dealer services and industry solutions, visit [www.cat.com](http://www.cat.com)





### **Excellent Service Access and “One Side Maintenance” Engine**

Fast, easy service with extended service intervals and convenient filter access increases productivity and reduces maintenance costs:

- Tilt-up large steel rear door and two (2) big side doors for easy access to all major components and service points
- The main hydraulic valve and lines are also easily reached through a removable floor plate and side panels
- All grease fittings can be easily reached
- Daily checks and regular service maintenance points accessible from ground level
- Radial seal air filter provides easier maintenance
- Efficient, large fuel filter and water separator with valve for easier maintenance
- Low maintenance bushings extend greasing intervals to 500 hours on blade and front linkage joints
- Hydraulic filter maintenance is extended to 2,000 hours
- Cat C2.4 DI engine is with “one side maintenance” to offer superior maintenance convenience
- The machine has durable steel body panels all around, offering good resistance to impact damage and helping to maintain the machine’s appearance and value
- S-O-S<sup>SM</sup> oil sampling valve allows easy sampling of the hydraulic fluid for preventative maintenance



# 305.5E2 Mini Hydraulic Excavator Specifications

## Engine

|                             |                   |
|-----------------------------|-------------------|
| Engine Model                | Cat C2.4 DI       |
| Rated Net Power @ 2,400 rpm | 31.1 kW (41.7 hp) |
| Gross Power @ 2,400 rpm     | 34.1 kW (45.7 hp) |
| Bore                        | 87 mm             |
| Stroke                      | 102.4 mm          |
| Displacement                | 2.4 L             |

- Meets China Stage III Nonroad emissions requirements.
- Net power rating per ISO 9249 and SAE J13149.
- Gross power rating per SAE J1995.

## Weights

|                           |         |
|---------------------------|---------|
| Operating Weight with Cab | 5400 kg |
|---------------------------|---------|

- Weight includes counterweight, steel track, 0.22 m<sup>3</sup> bucket and operator.

## Hydraulic System

|  |            |
|--|------------|
| Load Sensing Hydraulics with Variable Displacement Piston Pump |            |
| Type   | Cat        |
| Pump Flow @ 2,400 RPM  | 140 L/min  |
| Operating Pressure – Equipment                                 | 25 000 kPa |
| Operating Pressure – Travel                                    | 25 000 kPa |
| Operating Pressure – Swing                                     | 21 600 kPa |
| Digging Force – Stick  | 27.2 kN    |
| Digging Force – Bucket   | 35 kN      |

## Swing System

|                     |                        |
|---------------------|------------------------|
| Machine Swing Speed | 10.5 min <sup>-1</sup> |
| Swing Torque        | 13.9 N·m               |

## Blade

|             |         |
|-------------|---------|
| Width       | 1950 mm |
| Height      | 360 mm  |
| Dig Depth   | 480 mm  |
| Lift Height | 365 mm  |

## Service Refill Capacities

|                  |       |
|------------------|-------|
| Cooling System   | 9.8 L |
| Engine Oil       | 9.5 L |
| Fuel Tank        | 78 L  |
| Hydraulic Tank   | 58 L  |
| Hydraulic System | 85 L  |

## Drive

|                      |              |
|----------------------|--------------|
| Travel Speed         | 2.8/4.3 km/h |
| Maximum Drawbar Pull | 40.2 kN      |
| Gradeability         | 25 degrees   |

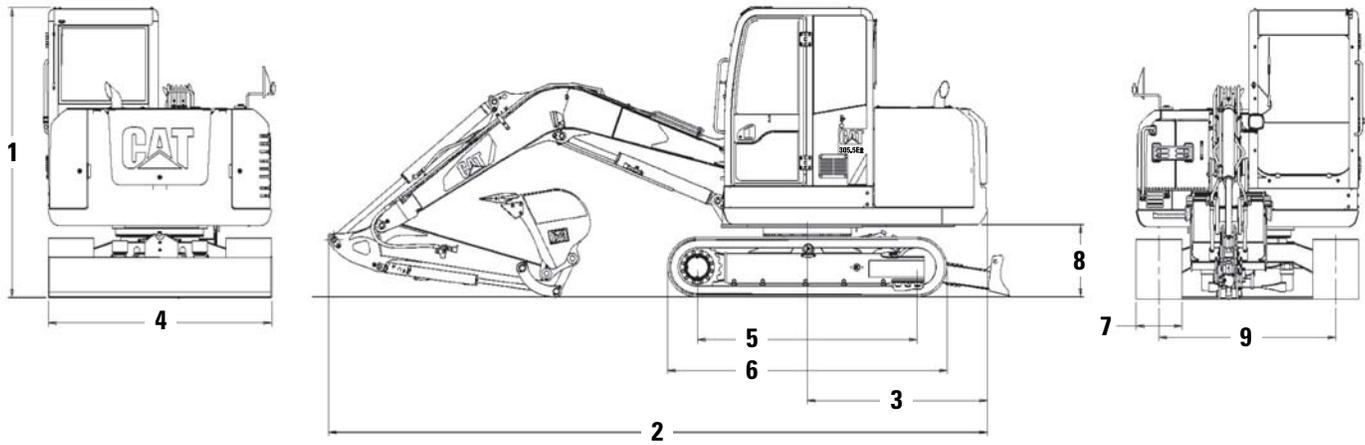
## Track

|                                       |          |
|---------------------------------------|----------|
| Track Shoe Width (standard)           | 400 mm   |
| Track Length                          | 2440 mm  |
| Ground Pressure                       | 31.0 kPa |
| Number of Shoes (each side)           | 38       |
| Number of Track Rollers (each side)   | 5        |
| Number of Carrier Rollers (each side) | 1        |

- Track shoe has 4 holes for pad shoe adoption.

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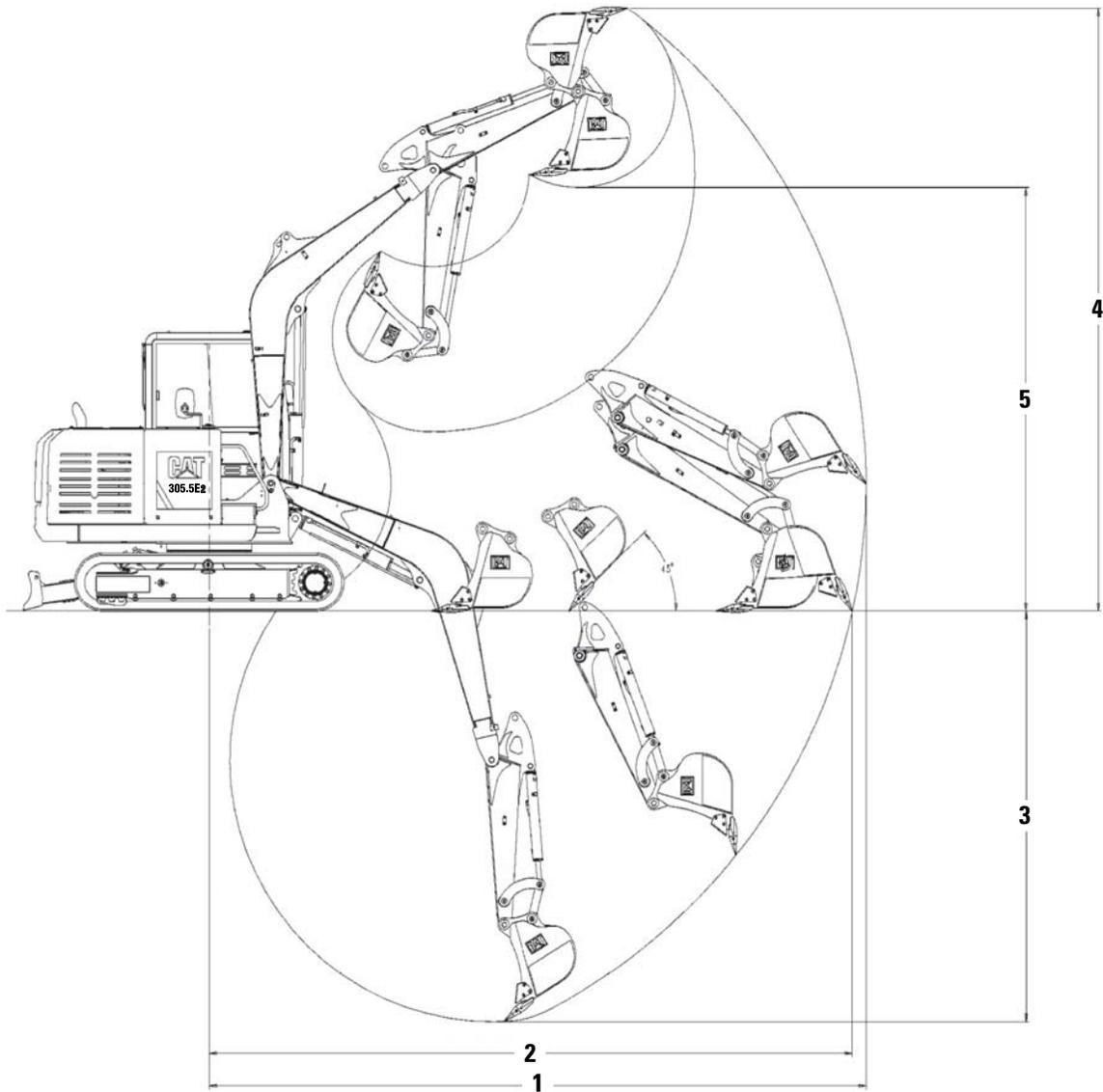
## Dimensions



|                               |         |
|-------------------------------|---------|
| 1 Shipping Height             | 2540 mm |
| 2 Shipping Length             | 5765 mm |
| 3 Tail Swing Radius           | 1580 mm |
| 4 Transport Width             | 1950 mm |
| 5 Length to Center of Rollers | 1920 mm |
| 6 Track Length                | 2440 mm |
| 7 Track Shoe Width            | 400 mm  |
| 8 Ground Clearance            | 628 mm  |
| 9 Track Gauge                 | 1550 mm |

# 305.5E2 Mini Hydraulic Excavator Specifications

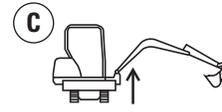
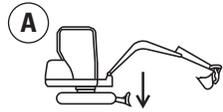
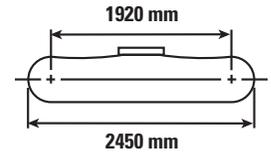
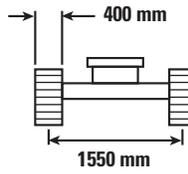
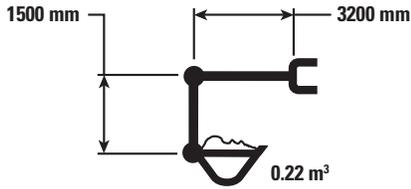
## Working Range



|                                      |         |
|--------------------------------------|---------|
| <b>1</b> Maximum Reach               | 5955 mm |
| <b>2</b> Maximum Reach @ Ground Line | 5830 mm |
| <b>3</b> Maximum Depth               | 3720 mm |
| <b>4</b> Maximum Digging Height      | 5460 mm |
| <b>5</b> Maximum Dump Height         | 3835 mm |

# 305.5E2 Mini Hydraulic Excavator Specifications

## Lift Capacities\*



|        |    | 2.0 m |       |       | 3.0 m |       |       | 4.0 m |       |       | Maximum |      |      | m   |
|--------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|------|------|-----|
|        |    | A     | B     | C     | A     | B     | C     | A     | B     | C     | A       | B    | C    |     |
| 4.0 m  | kg |       |       |       | *900  | *900  | *900  | *900  | *900  | *900  | *700    | *700 | *700 | 4.4 |
| 3.0 m  | kg |       |       |       | *1100 | *1100 | *1100 | *950  | *950  | *950  | *350    | *350 | *350 | 5.0 |
| 2.0 m  | kg |       |       |       | *1550 | *1550 | *1550 | *1150 | *1150 | *1150 | *950    | 650  | 550  | 5.2 |
| 1.0 m  | kg |       |       |       | *1950 | *1950 | 1250  | *1300 | *1300 | 800   | *950    | 650  | 500  | 5.2 |
| 0.0 m  | kg | *1000 | *1000 | *1000 | *2050 | 1500  | 1200  | *1400 | 950   | 800   | *750    | *750 | 500  | 5.2 |
| -1.0 m | kg | *2600 | *2600 | *2600 | *1950 | *1950 | 1200  | *1350 | 950   | 800   | *950    | *950 | 600  | 4.8 |
| -2.0 m | kg | *2450 | *2450 | *2450 | *1650 | *1650 | *1650 | *1050 | *1050 | *1050 | *600    | *600 | *600 | 4.2 |



ISO 10567



\*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 standard stick. The use of a work tool attachment point to handle/lift objects, could affect the machine lift performance.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

# 305.5E2 Standard Equipment

## Standard Equipment

Standard equipment may vary. Consult your Cat dealer for details.

- Cat C2.4 DI diesel engine with mechanical governor
- Two speed travel with manual shift
- Cat one key security system
- Door locks and cap locks
- Signaling/warning horn
- Product Link™
- Muffler with cover
- Radial seal air filter, double element
- Stacked cooling package
- Auxiliary hydraulic valve (one way/two way)
- Straight line travel
- Accumulator
- One touch low idle
- Cab:
  - Openable front windshield with assist device
  - Removable lower windshield with in cab storage bracket
  - Windshield wiper and washer
  - Interior lighting
  - Coat hook
  - Ashtray
  - Radio mounting (meet DIN size)
  - Two stereo speakers
  - Antenna
  - Cup holder
  - Storage pocket
  - Mounting for front and top guard (mounting boss)
  - Lighting group – cab
- Monitor:
  - Instrument panel and gauge
  - Warning information and machine condition
- Hour meter
- Rearview mirror, mounted on right hand side of upper frame
- Retractable seat belt (50 mm width)
- Hydraulic activation control lever (lock out) for all controls
- Two travel control hand levers
- Capability to install one additional pedal for auxiliary hydraulic control
- 400 mm triple grouser track shoes with holes (for rubber pad)
- 1950 mm blade with cutting edge
- Towing eye on base frame
- 60 Amp alternator
- 12V battery

## Optional Equipment

Optional equipment may vary. Consult your Cat dealer for details.

- Controls, auxiliary – auxiliary hydraulic lines from main auxiliary valve to boom foot plus auxiliary control pedal, auxiliary hydraulic lines from boom foot to stick, stop valves
- Travel alarm
- Heavy duty swivel guard
- Cab front guard
- Drain group – oil pan (ecology)
- Heater, water jacket
- Manufacturing film – plate for year of manufacture for export machines

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