

# 305 CR

Mini Hydraulic  
Excavator



**Stage II Compliant**

#### Engine Power

Gross	32 kW/43 hp
Net	31.3 kW/42 hp

#### Maximum Operating Weight

With cab	4990 kg
With canopy	4940 kg

## 305 CR Mini Hydraulic Excavator

*Designed and built by Caterpillar to deliver exceptional performance, versatility and productivity.*

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### Performance and Versatility

The Caterpillar 305 CR Mini Hydraulic Excavator has been designed to deliver exceptional performance providing optimum versatility and productivity. The compact radius of the upper structure stays within the width of the undercarriage, so the operator can concentrate on the work being performed without having to worry about the back of the machine.

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### Serviceability

Simple convenient daily maintenance is provided with the tilt-up, wide engine enclosure, allowing access to all major components and service points. Low maintenance bushings used on the front linkage and blade pin joints for 500 hour greasing intervals, reducing time for routine maintenance. All grease fittings can be easily reached.

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### Comfort and Ease of Operation

A spacious cab with sliding door provides easy entry and exit in confined jobsites.

The compact radius design and ergonomic low effort pilot hydraulics provide ease of operation, especially in space restrictive environments.

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### ***Built for Tough Work***

*The 305 CR provides outstanding lifting and digging performance in the tightest of applications.*



## Work Tools

*Caterpillar buckets and hydraulic powered tools, matched to fit the 305 CR Mini Hydraulic Excavator.*

### Customer Support

Caterpillar dealers offer unmatched customer support, with excellent warranty programs and fast parts availability resulting in maximum uptime and minimum repair costs. Equipment maintenance services help optimize machine performance, profit and reliability.

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**High Productivity and Long Life.** The 305 CR Mini Hydraulic Excavator utilizes work tools which have been designed to extend the versatility of the machine. Built for performance and durability, the full range of Mini Hydraulic Excavator work tools deliver high productivity, long life and excellent value.

- Digging Buckets
- Ditch Cleaning Buckets
- Hydraulic Hammers
- Augers
- Vibratory compactor

**Mechanical Quick Coupler.** This feature allows the operator to make fast and easy work tool changes. The Caterpillar Quick Coupler maximizes work tool performance while allowing the operator to change work tools efficiently



## Performance and Versatility

*The Caterpillar 305 CR has been designed to deliver exceptional productivity.*

**Compact Radius.** The design of the 305 CR gives the performance characteristics of traditional mini hydraulic excavators without any restrictions in confined areas.

- High performance in a compact package is provided by high digging forces and fast cycle times
- Efficient variable flow hydraulic system with stick regeneration and boom confluence valve enables high output excavation and loading capability
- High lifting capacity is enhanced by a boom drift reduction valve for lifting and holding tasks

**Versatility.** Versatility means the 305 CR is capable of completing a variety of tasks.

- Auxiliary lines enable the operation of a variety of work tools including hydraulic hammers, augers, shears and crushers
- Strong track drive and full width dozer blade enables effective site clearing, which is further enhanced by the dozer's visibility and float function

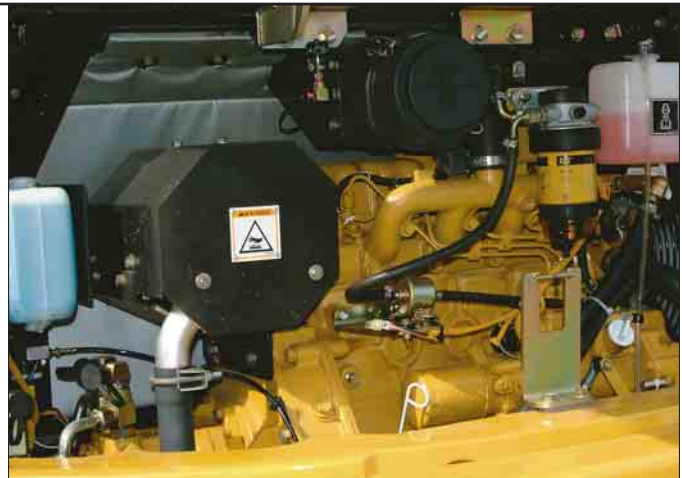


## Serviceability

*Spacious engine enclosure and wide tilt up engine enclosure allows easy access for maintenance and service.*

**Easy Access.** The large opening tilt-up engine cover provides easy, ground level access to all maintenance checkpoints. Removable panels on the rear side of the engine further improve component accessibility.

- Electric fuel pump provides automatic fuel priming
- Double element air filter for extra engine protection
- Single key locking of all covers for security and convenience
- Low maintenance bushings extend greasing intervals to 500 hours on dozer and all front linkage joints (except bucket)
- All grease points are protected from damage and are accessible from ground level
- S•O•S<sup>SM</sup> oil sampling valves provide easy sampling of hydraulic oil for preventative maintenance



## Comfort and Ease of Operation

*Large, comfortable operator station and responsive pilot hydraulics ensure ease of operation.*

**Operator Station.** The operator station is spacious with the dimensions of a larger excavator cab and is easy to enter and exit via the sliding door.

- Tinted glass reduces glare and heat build-up
- Gas strut assisted front window for easy opening
- Front window wiper and washer for a clear view
- Cab is radio ready
- The flat floor allows easy sweep out
- Optional front window guards

**Visibility.** Excellent visibility to the work tool and machine surroundings is provided by the offset boom and compact upperstructure.

- The dozer blade is visible from all swing angles for maximum convenience
- A polycarbonate skylight provides additional visibility at high boom positions

**Controllability.** Full controllability is provided by the low effort, ergonomically designed pilot hydraulic levers.

- Seat is adjustable relative to the controls to suit different operators and applications
- All controls are pilot hydraulic operated, including: front linkage, travel, auxiliary and dozer blade
- Dial type accelerator with kick down button for easy control of operating revs

**Comfort.** A high level of comfort provides maximum productivity.

- Fully adjustable reclining suspension seat
- Low operator and spectator sound levels
- The cab includes heater with temperature control and filter for front window defrost for maximum operator comfort



## Customer Support

*Complete services provided by the world's largest dealer network.*

**Dealer Support.** Unmatched dealer support with excellent equipment management services and fast parts availability – most within 24 hours – provide maximum uptime and minimum repair costs.

**Equipment Maintenance Services.** To help optimize machine performance and reliability. Services include:

- Customer Support Agreements
- Maintenance contracts
- Scheduled technical inspections

**Equipment Management Services.** To help optimize profits. Services include:

- Machine and work tool selection
- Rental and leasing
- Purchasing and finance
- Extended warranties

For a complete explanation of these services please contact your local Caterpillar dealer.



## Engine

Mitsubishi K4N naturally aspirated, watercooled, 4-stroke, 4 cylinder diesel.

Ratings at 2400 rpm	kW	hp
Gross Power	32	43
Net Power		
ISO 9249	31.3	42
Bore	90 mm	
Stroke	90 mm	
Displacement	2290 cm <sup>3</sup>	

- Meets EPA Tier 2 and EU Stage II off-highway emission regulations
- Glow plugs in each cylinder for easier cold-weather starting
- Gradeability (continuous) 25°

## Swing System

Independent swing circuit maintains swing speed and force while operating the front linkage.

Machine swing speed	9.6 rpm
Boom swing angles	
Left (min stop position)	55°
Left (max stop position)	80°
Right	50°

- Self lubricating swing speed reduction gear
- Grease bath lubricated pinion
- Automatic, spring applied parking brake prevents swing drift on a slope and during machine transportation

## Travel System

Travel speed	
High	4.6 km/h
Low	2.7 km/h
Traction force	44.6 kN

- Compact drive modules within track width for protection
- Straight-line travel possible when tracking and operating the front linkage together
- Counter balance valves built-in prevent over speed conditions when traveling down slopes

## Hydraulic System

Open-center system with two cross-sensing, variable displacement pumps and single gear pump for maximum output and efficiency.

Pump (maximum flow)	
Piston	2 x 52.1 l/min
Gear	1 x 42.1 l/min
Pilot	1 x 13.5 l/min
Operating pressures	
Linkage/Travel/Swing	245 bar

Auxiliary circuit (maximum)	
Flow	94.2 l/min
Pressure	245 bar
Digging forces (at cutting edge)	
Bucket	42.0 kN
Standard stick	27.6 kN
Long stick	23.3 kN

- Stick regeneration circuit enables high stick-in speeds
- Boom confluence valve combines pump flows for faster lift speed
- Boom drift reduction valve minimizes boom movement for lifting duties

## Weights

With rubber track, bucket, operator, full fuel tank and auxiliary lines. Weights vary depending on machine configuration.

Cab	4800 kg
Canopy	4750 kg

- Additional counterweight adds 190 kg to machine weights

## Electrical System

System voltage	12V
Alternator output	50 amp
Starter motor	2.0 kW
Battery	650 CCA, 55 amp/h

- Maintenance free battery
- Sealed electrical connectors
- Abrasion and flame resistant braiding on harnesses
- Circuit breaker for overload protection

## Undercarriage

- X-shaped, fabricated carbody for strength and durability
- Sloping track roller frames and dirt relief holes reduce build-up of debris
- Track tension adjustment by grease filled cylinder
- 5 bottom rollers and one top roller per side
- Ground clearance 335 mm

## Service Refill

	Liters
Cooling system	7
Engine Oil	8.3
Fuel Tank	68
Hydraulic Tank	57
Hydraulic System	85

## Cab

- The cab structures meet FOPS, ISO 10262 (level 1) and TOPS, ISO 12117
- Cab glass tinted with front window wiper and washer standard
- All major controls are pilot hydraulic operated
- All hydraulic controls are isolated including the travel function by lift up console

## Sound

### Operator Sound

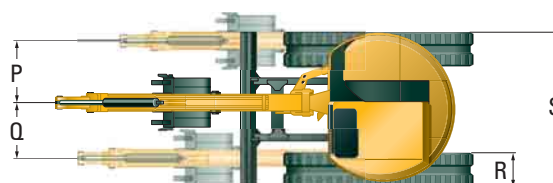
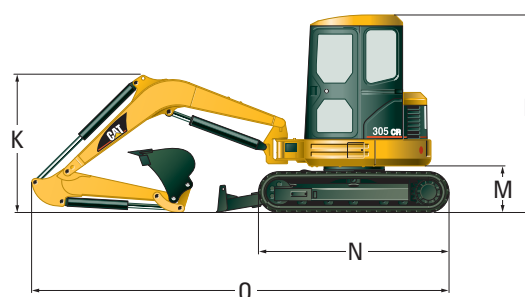
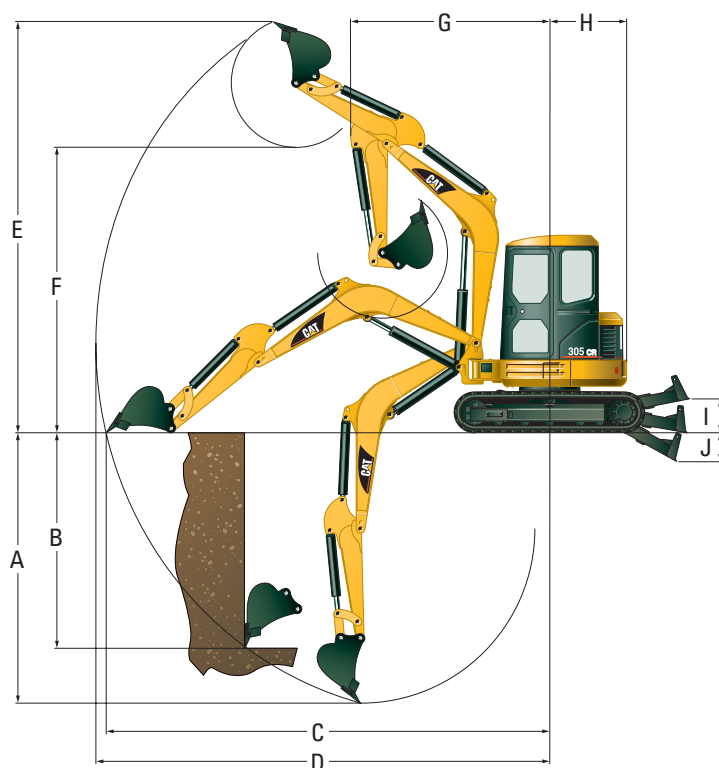
The operator sound level with cab measured according to the procedures specified in ISO 6396 is 83 dB(A).

### Exterior Sound

The labeled spectator sound power level measured according to the test procedures and conditions specified in 2000/14/EC is 100 dB(A).

## Dimensions and Working Range

All dimensions are approximate.



	A	B	C	D	E	F	G	H*	I	J	K	L	M	N	O	P	Q	R	S
Standard Stick																			
mm	3530	2750	5750	5890	5370	3730	2550	990	460	360	1750	2595	625	2450	5365	910	650	400	1980
Long Stick																			
mm	3930	3370	6140	6270	5600	3960	2535	990	460	360	2110	2595	625	2450	5290	910	650	400	1980

\* Additional counterweight increases this dimension by 100 mm.

## Standard Equipment

Standard equipment may vary.  
Consult your Caterpillar dealer for specifics.

Automatic swing parking brake	Rubber tracks
Boom cylinder guard	Seatbelt
Boom drift reduction valve	Standard stick
Dozer blade with float function	Vinyl suspension seat
Gauges/indicators for fuel, engine oil pressure and coolant temperature, air cleaner, alternator and glow plugs	Two speed travel
Canopy to TOPS and FOPS standards	Double element air filter
Hour meter	Floormat
Low maintenance linkage joints	
Maintenance free battery	

## Optional Equipment

Optional equipment may vary.  
Consult your Caterpillar dealer for specifics.

Auxiliary hydraulic lines for front linkage	Long stick
Cab, fully glazed to TOPS and FOPS standards with heater, interior light, front window washer/wiper and radio-ready kit	Steel tracks
Additional counterweight (190 kg)	Fabric Suspension seat
Travel foot pedals	Travel alarm
Front screen guard for cab and canopy	Mechanical quick coupler
Cab/canopy mounted lights	Work tools
Boom mounted lights	

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Materials and specifications are subject to change without notice.  
Featured machines may include additional equipment.  
See your Caterpillar dealer for available options.

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