



Cat[®] 309 CR VAB

MINI HYDRAULIC EXCAVATOR

FEATURES:

The Cat[®] 309 CR Variable Angle Boom (VAB) Mini Excavator delivers maximum power and performance in a mini size to help you work in a wide range of applications. The Variable Angle Boom provides the maximum in linkage flexibility in tight applications.

ALL DAY COMFORT

- A sealed and pressurized cab is equipped with an improved air conditioning system, adjustable wrist rests and a suspension seat to help keep you working comfortably all day long.

EASY TO OPERATE

- Controls are easy to use and the intuitive Next Generation Monitor provides customizable machine operator preferences and easy to read machine information.

STICK STEER TRAVEL MODE

- Moving around the job site is even easier with the Cat Stick Steer option. Easily switch from traditional travel controls with levers and pedals to joystick controls with a push of a button. The benefit of less effort and improved control is in your hands!

BIG PERFORMANCE IN A MINI DESIGN

- Increased lifting, swinging, travel and multi-functioning performance helps you get the job done more efficiently, and dig-to-blade allows for easy clean up.

SAFETY ON THE JOB SITE

- Your safety is our top priority. The Cat Mini Excavator is designed to help keep you safe on the job. A back-up camera, courtesy work lights and a fluorescent retractable seat belt are just a few of the safety features we've built into the machine.

SIMPLE SERVICE FOR LESS DOWNTIME

- Maintenance is quick and easy on the Cat Mini Excavator. Routine check points are easy to access at ground level with grouped service points and robust service panels.

LOWER OPERATING COSTS

- Equipped with features such as auto idle, auto engine shutdown, and efficient hydraulics with a variable displacement pump, the Cat Mini Excavator was designed with reducing your operating costs in mind.

UNMATCHED DEALER SUPPORT

- Your Cat dealer is here to help you reach your business goals. From providing equipment solutions to operator training to service needs and beyond, your Cat dealer is ready to help.

Specifications†

Engine

Engine Model	Cat C3.3B	
Rated Net Power @ 2,200 rpm		
U.S. EPA Tier 4 Final	52.4 kW	70.3 hp
EU Stage V	53.3 kW	71.5 hp
ISO 9249/EEC 80/1269		
Gross Power		
ISO 14396	55.4 kW	74.3 hp
Bore	94 mm	3.7 in
Stroke	120 mm	4.7 in
Displacement	3.33 L	203 in ³

Weights

Maximum Operating Weight with Cab*	9550 kg	21,054 lb
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*Maximum Weight is based on steel tracks with rubber pads, counterweight, operator, full fuel tank, standard stick, blade and no bucket.

Weight Increase from Minimum Configuration

Counterweight	250 kg	552 lb
Long Stick	66 kg	146 lb
Steel Tracks with Pads	330 kg	728 lb

†The 309 CR VAB specifications are based on a machine configured with a Long (L) Undercarriage. For specifications representing a 309 CR VAB with a Standard Undercarriage, please refer to the 308 CR information.



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Travel System

Travel Speed – High	4.9 km/h	3.1 mph
Travel Speed – Low	2.6 km/h	1.6 mph
Maximum Traction Force – High Speed	28.9 kN	6,497 lbf
Maximum Traction Force – Low Speed	84.8 kN	19,064 lbf
Ground Pressure – Maximum Weight	41.5 kPa	6 psi
Gradeability (maximum)	30 degrees	

Service Refill Capacities

Cooling System	10.0 L	2.6 gal
Engine Oil	11.2 L	3.0 gal
Fuel Tank	147 L	39 gal
Hydraulic Tank	53 L	14 gal
Hydraulic System	107 L	28 gal

Hydraulic System

Load Sensing Hydraulics with Variable Displacement Piston Pump		
Pump Flow @ 2,400 rpm	233 L/min	62 gal/min
Operating Pressure – Equipment	285 bar	4,134 psi
Operating Pressure – Travel	285 bar	4,134 psi
Operating Pressure – Swing	250 bar	3,626 psi
Auxiliary Circuit – Primary (High Flow)		
Flow	140 L/min	37 gal/min
Pressure	285 bar	4,134 psi
Auxiliary Circuit – Secondary		
Flow	33 L/min	9 gal/min
Pressure	285 bar	4,134 psi
Digging Force – Stick (Standard)	41.1 kN	9,241 lbf
Digging Force – Bucket	61.7 kN	13,867 lbf

Swing System

Machine Swing Speed	10.6 rpm
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Blade

Width (Standard)	2470 mm	97.2 in
Width (Wide)	2640 mm	103.9 in
Height	431 mm	17 in

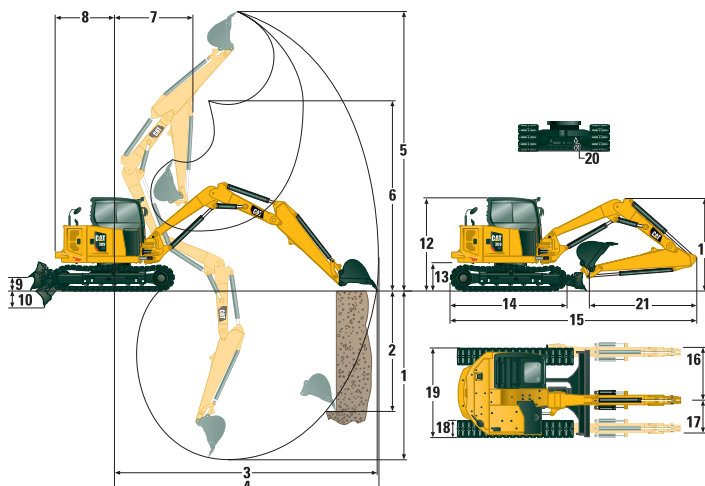
Certification – Cab

Roll Over Protective Structure (ROPS)	ISO 12117-2:2008
Tip Over Protective Structure (TOPS)	ISO 12117:1997
Top Guard	ISO 10262:1998 (Level II)

Sound

Operator Sound Pressure (ISO 6396:2008)	72 dB(A)
Average Exterior Sound Pressure (ISO 6395:2008)	99 dB(A)

- European Union Directive “2000/14/EC”



Dimensions

	VAB In	VAB Out
1 Dig Depth	3931 mm (154.8 in)	3468 mm (136.5 in)
2 Vertical Wall	3394 mm (133.6 in)	3524 mm (138.7 in)
3 Maximum Reach at Ground Level	6403 mm (252.1 in)	7732 mm (304.4 in)
4 Maximum Reach	6612 mm (260.3 in)	7900 mm (311.0 in)
5 Maximum Dig Height	5494 mm (216.3 in)	8171 mm (321.7 in)
6 Maximum Dump Clearance	3643 mm (143.4 in)	6390 mm (251.6 in)
7 Boom in Reach	2853 mm (112.3 in)	2995 mm (117.9 in)
8 Tail Swing with Counterweight	1645 mm (64.8 in)	1645 mm (64.8 in)
Tail Swing without Counterweight	1450 mm (57.1 in)	1450 mm (57.1 in)
9 Maximum Blade Height	342 mm (13.5 in)	342 mm (13.5 in)
10 Maximum Blade Depth	684 mm (26.9 in)	684 mm (26.9 in)
11 Transport Height	2530 mm (99.6 in)	2452 mm (96.5 in)
12 Cab Height	2514 mm (99.0 in)	2514 mm (99.0 in)
13 Swing Bearing Height	798 mm (31.4 in)	798 mm (31.4 in)
14 Overall Undercarriage Length	3200 mm (126.0 in)	3200 mm (126.0 in)
15 Overall Shipping Length	5771 mm (227.2 in)	7158 mm (281.8 in)
16 Boom Swing Right	935 mm (37 in)	935 mm (37 in)
17 Boom Swing Left	604 mm (24 in)	604 mm (24 in)
18 Track Belt/Shoe Width	450 mm (17.7 in)	450 mm (17.7 in)
19 Overall Track Width	2470 mm (97.2 in)	2470 mm (97.2 in)
20 Ground Clearance	343 mm (13.5 in)	343 mm (13.5 in)
21 Stick Length	1823 mm (71.8 in)	1823 mm (71.8 in)

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 1.430 metric tonnes.

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Lift Capacities – Maximum Configuration*†

Lift Point Height			3 m (9.8 ft)			4.5 m (14.8 ft)			Lift Point Radius (Maximum)			
			Over Front		Over Side	Over Front		Over Side	Over Front		Over Side	m (ft)
			Blade Down	Blade Up		Blade Down	Blade Up		Blade Down	Blade Up		
4.5 m (14.8 ft)	VAB Out	kg (lb)				2480 (5,467)	2480 (5,467)	2043 (4,504)	1418 (3,126)	1418 (3,126)	1151 (2,538)	6.23 (20.5)
	VAB In	kg (lb)							1324 (2,919)	1324 (2,919)	1324 (2,919)	4.65 (15.3)
3 m (9.8 ft)	VAB Out	kg (lb)				2800 (6,173)	2800 (6,173)	1927 (4,248)	1307 (2,881)	1307 (2,881)	967 (2,132)	6.85 (22.5)
	VAB In	kg (lb)				1769 (3,900)	1769 (3,900)	1769 (3,900)	1276 (2,813)	1276 (2,813)	1276 (2,813)	5.50 (18.0)
1.5 m (4.9 ft)	VAB Out	kg (lb)							1313 (2,895)	1313 (2,895)	910 (2,006)	7.04 (23.1)
	VAB In	kg (lb)	4242 (9,352)	4242 (9,352)	4242 (9,352)	2445 (5,390)	2445 (5,390)	1958 (4,317)	1419 (3,128)	1419 (3,128)	1419 (3,128)	5.74 (18.8)
0 m (0 ft)	VAB Out	kg (lb)				2795 (6,162)	2193 (4,835)	1702 (3,752)	1220 (2,690)	1220 (2,690)	944 (2,081)	6.84 (22.4)
	VAB In	kg (lb)	5720 (12,610)	4538 (10,005)	3373 (7,436)	3023 (6,665)	2335 (5,148)	1834 (4,043)	1849 (4,076)	1849 (4,076)	1369 (3,018)	5.48 (18.0)

*Maximum Weight includes steel tracks with rubber pads, counterweight, operator, full fuel tank, standard stick, blade and no bucket.

†The 309 CR VAB lift capacity specifications are based on a machine configured with a Long (L) Undercarriage.
For lift capacity specifications representing a 309 CR VAB with a Standard Undercarriage, please refer to the 308 CR information.

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EQUIPMENT

ENGINE

- Cat C3.3B Diesel Engine (U.S. EPA Tier 4 Final/EU Stage V) – Electronic Engine, Turbo, Diesel Particulate Filter (DPF)
- Automatic Engine Idle
- Automatic Engine Shutdown
- Automatic Swing Brake
- Automatic Two Speed Travel
- Fuel Water Separator with Indicator
- Radial Seal – Double Element Air Filter
- Extended Life Coolant, –37° C (–35° F)
- Ecology Drain

HYDRAULICS

- Smart Tech Electronic Pump
- Variable Displacement Piston Pump
- Load Sensing/Flow Sharing Hydraulics
- Power On Demand
- Hydraulic Temperature Monitoring
- Certified Accumulator
- Hydro Advanced Hydraulic Oil
- Case Drain Line

OPERATOR ENVIRONMENT

- Sealed and Pressurized Cab
- Operator Sound Pressure 72 dB(A) ISO 6396:2008
- Stick Steer Mode
- Travel Cruise Control
- Control Pattern Changer
- Adjustable Wrist Rests
- Molded Footrests

- Removable, Washable Floor Mat
- Travel Pedals and Hand Levers
- Cat Key with Passcode Option
- HVAC with Automatic Temperature Control
- Hydraulic Lockout Controls
- Integrated Lower Front Window
- Assisted Front Window Overhead Storage
- Rear Window Emergency Exit
- Fabric, High Back, Suspension Seat
- Retractable Seat Belt (75 mm/3 in)
- Coat Hook
- Cup Holder
- LED Interior Light
- Literature Holder
- 12V Power Socket
- Radio – Bluetooth®, USB, Auxiliary, Microphone
- Skylight
- Mounting Bosses for Top and Front Guards
- ROPS – ISO 12117-2:2008
- TOPS – ISO 12117:1997
- Top Guard – ISO 10262:1998 (Level II)
- Color LCD Monitor
 - Fuel Level and Coolant Temperature Gauges
 - Maintenance and Machine Monitoring
 - Performance and Machine Adjustments
 - Numeric Security Code
 - Multiple Languages
 - Camera Ready
 - Hour Meter with Wake Up Switch
 - Jog Dial Control Interface

UNDERCARRIAGE

- Greased and Lubricated Track
- Hydraulic Track Adjusters
- Tie Down Eyes on Track Frame
- Dozer Blade
- Dozer Float
- Bolt-on, Reversible Wear Edge
- Steel Tracks (450 mm/17.7 in wide)

BOOM, STICK AND LINKAGES

- Variable Angle Boom
- Standard Stick (1823 mm/71.8 in)
- Front Shovel Capable (Pin-On/Manual Coupler/Hydraulic Coupler – not available in all regions)
- Thumb Ready (not available in all regions)
- Certified Lifting Eye (not available in all regions)

ELECTRICAL

- 12 Volt Electrical System
- 90 Ampere Alternator
- 850 CCA Maintenance Free Battery
- Circuit Breaker
- Ignition Key Stop Switch
- Signaling/Warning Horn
- Product Link™ Elite Lite (regulations apply)

OPTIONAL EQUIPMENT

OPERATOR ENVIRONMENT

- Rain Visor
- Air Suspension Heated Seat

ELECTRICAL

- Rearview Camera
- Rotating Beacon

OTHER

- Attachments including Buckets, Augers and Hammers
- Wide Steel Tracks (600 mm/23.6 in)
- Wide Dozer Blade
- 2nd Auxiliary Hydraulic Lines
- Additional Counterweight
- Boom and Stick Hose Burst Check Valves

- Bucket Linkage with Lift Eye
- Track Guides
- Water Jacket Heater
- Refueling Pump
- Cab Guarding
- Travel Alarm (standard in some regions)

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at www.cat.com

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