

# 301.6C, 301.8C

Mini Hydraulic  
Excavators



	301.6C	301.8C
<b>Naturally Aspirated Diesel Engine</b>		
Net Power (ISO 9249) at 2400 rpm		13.5 kW/18.4 hp
<b>Operating Weight</b>		
With canopy	1610 kg	1680 kg
With cab	1720 kg	1785 kg

# Caterpillar® 301.6C and 301.8C Mini Hydraulic Excavators

*Designed to deliver reliable performance, versatility and ease of operation.*

---

## Performance and Versatility

**High digging forces and fast cycle times,** ensure that the Cat C-Series machines deliver the productivity that customers demand.

**Auxiliary lines and connectors fitted as standard,** mean that the Cat 301.6C and 301.8C come 'ready to work'.

**Hammer (one-way) auxiliary lines** fitted as standard.

**The dozer blade float function** enables more efficient clean up and landscaping operations.

**Choice of standard or long stick** enables matching of machine to application.

**High rotation bucket angle** combines good spoil retention and flat back trench characteristics.

---

## Comfort and Ease of Operation

**Cab and canopy options** are available. The C-Series cab provides a very spacious and comfortable work area with a high feature level as standard.

**Impressive legroom,** air circulation and well positioned, low effort controls give even greater operator comfort.

**Suspension seat as standard.**

**Automatically applied swing lock** aids machine transportation.

**Optional fan and sun blind package** offers further operator comfort.

## *Engineered Durability*

*The heavy-duty bodywork and clean lines of the Caterpillar 301.6C and 301.8C ensure long life and reduce maintenance cost in tough, demanding applications.*



---

## Low Operating Costs

**Robust, reliable and easily serviced,** are key attributes of the C-Series design.

**Protected front linkage lines** are routed out of harms way, above the boom and stick.

**A tough counterweight and extra thick side panels** protect against impact damage.

**A large rear door** enables excellent access, whilst low maintenance front linkage pivot joints and well placed grease points reduce time taken for daily checks.

**The Cat S•O•S points** assist easy oil sampling for preventative maintenance checks.

**500 hour engine oil change period** helps to keep operating costs down.

---

## Customer Support

**Caterpillar dealers** offer unmatched customer support with excellent equipment management services and fast parts availability, resulting in maximum uptime and minimum repair costs.

**Equipment maintenance and management services** help optimize performance, reliability and profit.



## Operator Station

*Class leading space and high feature levels lead to a comfortable and productive environment.*

**The large, spacious cab** of the Caterpillar C-Series offers excellent all round visibility and flat glass throughout for easy and inexpensive replacement.

**Superior operator legroom** and door width offer even greater comfort and ease of use.

**'Eye line' instrumentation** provides the operator with a clear view of the machines monitoring system, ensuring fuel level, water temperature, and warning lights are easily seen. A service interval indicator is also included.

**Dozer lever mounted two speed travel control** provides easy operation and increased foot room.

**Dozer float** enables easy ground levelling for landscaping and finishing.

**Adjustable wrist supports** increase operator comfort and reduce fatigue.

**Automatically applied swing park brake** which aids machine transportation.



## Work Tools

*Caterpillar's range of buckets and hydraulically powered tools, matched to optimize machine performance.*

**Caterpillar offers a wide range of work tools** to increase the machines versatility even further. These tools are designed to get the best out of the machine and deliver excellent value through high productivity and long life.

Tools on offer include:

- Digging Buckets
- Ditch Cleaning Buckets
- Hydraulic Hammers
- Tilt Ditch Bucket
- Augers

### **Mechanical Quick Coupler.**

The Caterpillar Quick Coupler makes tool changes fast and easy. Maximizing performance and compatible with all standard work tools.



## Serviceability

*Designed to keep 'down-time' to a minimum, with easy access and convenient locations for all daily checks.*

**A large 'swing out' rear door** allows access to major components and service points within the engine enclosure.

- Air filter
- Engine oil check and fill
- Engine oil filter element
- Radiator reservoir tank, check and fill
- Vertically mounted, spin-on fuel filter/water separator
- Windshield washer tank

**A sight gauge** for hydraulic oil makes fluid level checks convenient.

**S•O•S oil sampling valve** allows easy sampling of the hydraulic fluid for preventative maintenance.

**500 hour oil and filter change period** reduces operating costs and machine down time.

**Clean sided front linkage** with concealed hosing reduces damage and machine down time.



## Customer Support

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

**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
- S•O•S oil analysis
- Maintenance contracts
- Scheduled technical inspections

**Equipment management services** to help optimize profits. Services include:

- Machine and work tool selection
- Rental and leasing
- Purchasing and financing
- Owning and operating cost management
- Extended warranties

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



## Engine

Mitsubishi L3E. Naturally aspirated, watercooled, 4 stroke, 3 cylinder diesel engine.

### Ratings at 2400 rpm

Gross power	14.0 kW	19.0 hp
Net power	13.5 kW	18.4 hp

### Dimensions

Bore	76 mm
Stroke	70 mm
Displacement	952 cm <sup>3</sup>

- All engine horsepower (hp) are metric including front page.
- Net power rating per ISO 9249 and EEC 80/1269
- Meets EU Stage II emission requirements

## Sound Levels

Operator sound pressure level is 83 dB(A) for cab and 83 dB(A) for canopy builds when measured per ISO 6396 (dynamic).

## Undercarriage

H-shaped, fabricated frame.

- Fabricated design gives high durability
- Tapered roller frame reduces accumulation of material in the tracks
- Track tension adjustment is accomplished through grease-filled cylinders
- 301.8C variable width undercarriage for increased stability

## Hydraulic System

### Pumps/Pressures/Circuits

Pumps: Two piston, one gear-type (max. delivery)

Tandem	2 x 19.8 lpm
Single	1 x 14.6 lpm

### Operating pressures

Equipment	206 bar
Travel	206 bar
Swing	174 bar

### Auxiliary circuits

Primary	34.4 lpm at 174 bar
Secondary	14.6 lpm at 174 bar

### Digging Forces

Stick, standard	9.9 kN
Stick, long	8.8 kN
Bucket	15.4 kN

- Auxiliary lines for hammer operation are standard
- Two-way auxiliary lines for work tools such as augers and tilt ditch bucket are optional

## Electrical System

- 40-amp alternator
- 12-volt, 500 CCA, 35 amp/h maintenance free battery
- Sealed electrical connectors

## Blade

	301.6C	301.8C
Width	mm	mm
Standard	980	980
Extended	–	1340
Height of blade	225	255
Dig depth	230	250
Lift height	180	195

- Blade flotation function provides easier operation
- Replaceable, hardened, wear resistant cutting edge
- 301.8C has pin-on blade extensions to match width to extended undercarriage

## Swing System

Machine swing speed	10.5 rpm
Boom swing system with cast swing post	

Left (without stop)	90°
Left (with stop)	54°
Right	50°

- Automatic swing brake, spring applied, hydraulic release
- Centralized lubrication

## Service Refill Capacities

	Liters
Cooling system	4.0
Engine oil	4.1
Fuel tank	22
Hydraulic tank	24
Hydraulic system	37

## Weights\*

With bucket, operator, full fuel and auxiliary lines.

	301.6C	301.8C
Canopy (kg)	1610	1680
Cab (kg)	1720	1785

\* Weight depends on machine configuration.

## Travel System

Travel speed	
High	4.5 km/h
Low	2.0 km/h

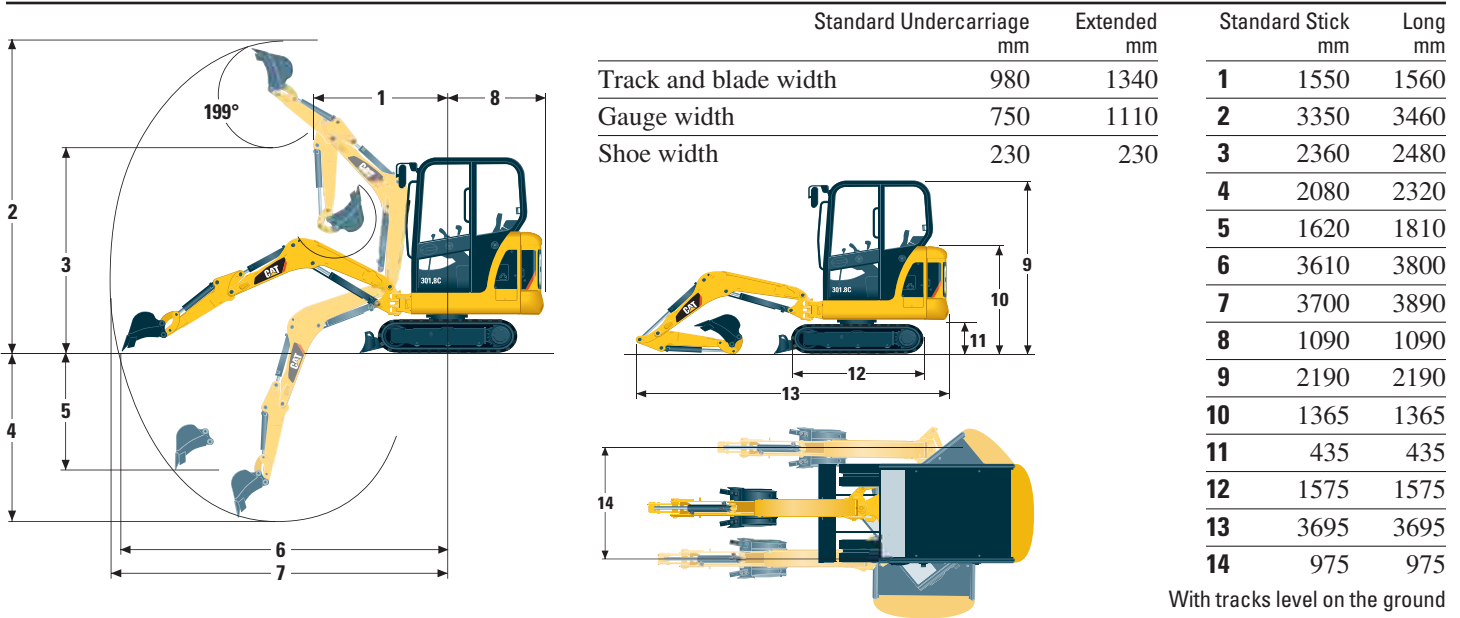
### Traction force (max.)

High Speed	7 kN
Low Speed	15 kN

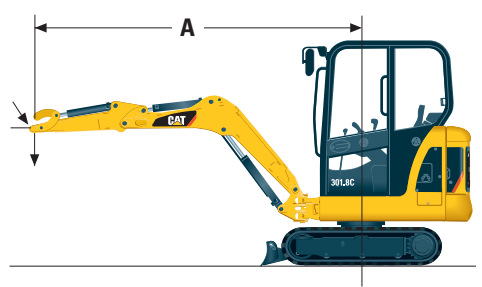
Gradeability (max.)	30°
---------------------	-----

- Each track is driven by one independent 2-speed motor
- Drive modules are integrated into the roller frame for total protection
- Straight line travel when tracking and operating the front linkage simultaneously

# Dimensions and Lift Capacities



Lift Capacities at Ground Level	Over front	Over side	Over front	Over side
<b>A</b> Lift Point Radius (mm)	2000		3000	
Standard Undercarriage				
Blade down (kg)	*787	362	*450	219
Blade up (kg)	515	329	300	201
Extended Undercarriage (301.8 only)				
Blade down (kg)	*782	580	*445	334
Blade up (kg)	524	536	303	311



\* Limited by hydraulic capacity rather than tipping load.  
 The above loads are in compliance with SAE hydraulic excavator lift capacity rating standard SAE J1097 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 for standard stick.

## Standard Equipment

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

- Adjustable wrist rests
- Alternator
- Automatic swing parking brake
- Auxiliary hydraulic circuit valve, controls and 'one way' (hammer) lines to the stick
- Auxiliary line quick couplers
- Boom cylinder guard
- Cab mounted work light
- Canopy, FOPS ISO 10262 (Level I) and TOPS ISO 12117
- Coat hook and cup holder
- Dozer blade with float function
- Floor mat
- Gauges or indicators for fuel level, engine coolant temperature, hour meter, engine oil pressure, air cleaner, alternator and glow plugs, service interval
- Horn
- Hydraulic oil cooler
- Lockable storage box
- Low maintenance linkage pin joints
- Maintenance-free battery
- Mobile phone holder and power point
- Rubber track, 230 mm wide
- Seatbelt, 50 mm
- Standard stick
- Suspension seat, vinyl covered
- Travel pedals
- Two-speed travel (dozer lever mounted)

## Optional Equipment

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

- 'Two way' (auger) auxiliary lines to the stick
- Biodegradable hydraulic oil
- Boom check valve
- Boom mounted light
- Cab, fully glazed with FOPS per ISO 10262 (Level 1), TOPS per ISO 12117, heater/defroster, interior light, windshield wiper and washer
- Control pattern changer
- Ecology drain valve for hydraulic tank
- Ecology drain valve for engine oil
- Fan and sun blind installation
- Front screen guard for cab and canopy
- Immobilizer system
- Long stick
- Mechanical quick coupler
- Mirrors, for cab and canopy
- Radio/CD player
- Radio installation kit
- Seat belt, 75 mm wide
- Suspension seat, fabric covered
  - Standard
  - High back
- 'Thumb ready' stick
- Tool kit
- Travel alarm
- Work tools

# 301.6C and 301.8C Mini Hydraulic Excavators

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at [www.cat.com](http://www.cat.com)

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

© 2006 Caterpillar -- All rights reserved

CAT, CATERPILLAR, their respective logos, "Caterpillar Yellow" and the POWER EDGE trade dress as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.

HEHH3291-1 (12/2006) hr

 **CATERPILLAR®**