

# 301.5, 301.6, 301.8

## Mini Hydraulic Excavator



301.5			301.6		301.8	
Cat® 3003 Naturally Aspirated Diesel Engine						
Flywheel Power	13 kW	17.4 hp	13 kW	17.4 hp	13 kW	17.4 hp
Operating Weight						
With canopy	1616 kg	3563 lb	1671 kg	3684 lb	1746 kg	3849 lb
With cab	1735 kg	3825 lb	1790 kg	3946 lb	1865 kg	4112 lb



## Caterpillar® 301.5, 301.6, 301.8 Mini Hydraulic Excavators

*Designed, built and backed by Caterpillar to deliver exceptional performance and versatility, ease of operation, serviceability and customer support.*

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### Performance and Versatility

A wide range of work tools gives the 301.5, 301.6 and 301.8 Mini Hydraulic Excavators versatility in applications such as building construction, landscaping and demolition. The blade has a float function, allowing more efficient clean up operations, particularly on finished surfaces. The two-speed hydrostatic power train provides fast travel speeds between work areas. For extra stability the 301.6 has longer tracks and extra counterweight, and the 301.8 has the longer tracks and variable width undercarriage.

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### Ease of Operation

Equipped with cab or canopy, these machines provide an excellent view to the work area. The optional cab is easy to enter and is equipped with many convenience features. Low effort controls are ergonomically designed for maximum operator comfort. The undercarriage on the 301.8 can be extended and retracted by lever operation providing access to confined sites. **pg. 4**

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### Serviceability

Tilt-up hood gives access to all major components and service points, making daily maintenance easy. The S•O•S<sup>SM</sup> oil sampling valve provides easy sampling of hydraulic oil for preventative maintenance. **pg. 5**

### ***Built for tough work***

*The Caterpillar 301.5, 301.6 and 301.8 Mini Hydraulic Excavators are built to the same high standards as larger Caterpillar excavators. Stylish design, high quality finish, impact resistant non-metallic corners and built-in hydraulic lines protect from damage and help maintain the machines high value.*



## Work Tools

*Caterpillar buckets and hydraulic powered tools, matched to fit the 301.5, 301.6 and 301.8 Mini Hydraulic Excavators.*

### 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. **pg. 5**



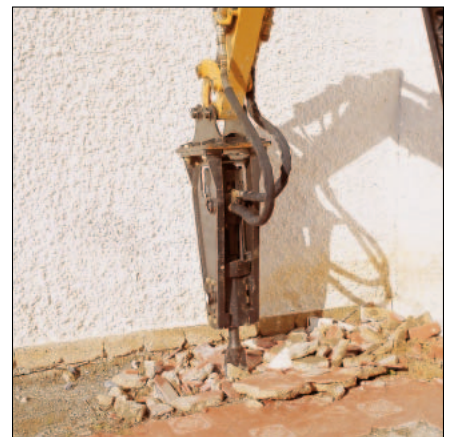
### Work Tools

Caterpillar designed work tools extend the versatility of these Mini Hydraulic Excavators. Built for performance and durability, the full range of mini hydraulic excavator work tools deliver high productivity, long service life and excellent value.

- Digging Buckets
- Ditch Cleaning Buckets
- Hydraulic Hammers
- Auger

### Mechanical Quick Coupler

This feature allows the operator to make fast, easy work tool changes. The Caterpillar Quick Coupler maximizes performance while allowing use of standard buckets and work tools.





## Operator Station

*Comfortable, world class cab and unmatched ease of operation.*



**Excellent viewing** to the work tool is possible with large windows and offset swing post. The curved hood and large rear glass give superior viewing to the rear. The easy-to-open front window and sliding right-side window offer excellent ventilation.

**Low effort pilot hydraulics** and ergonomically designed controls minimize fatigue and maximize comfort for the operator. The automatic swing lock helps ensure that the boom is held in a secure position while transporting the machine. Straight line travel is

provided to help maintain a straight course while tracking and operating the front linkage simultaneously. The console serves as a hydraulic system lockout, preventing use of all hydraulic functions when placed in the up position.

**Operator station** is easy to enter and exit, and the flat floor is easy to clean. The optional spacious cab is equipped with many convenience features:

- Heater and defroster
- Interior light

- Mounting blocks for mirrors, lights and front guards

- Windshield wiper and washer

Other features in the cab and canopy include:

- Coat hook
- Gauges and indicators
- Storage space
- Optional suspension seat, vinyl or fabric covered

## Serviceability

*Quick access and superior design make the Mini Hydraulic Excavator easy to maintain.*

**Easy access** to major components and service points is provided by the large opening tilt-up engine enclosure.

- Air filter (filter blockage indicator on gauge panel)
- Engine oil check and fill
- Engine oil filter element
- Maintenance-free battery
- Radiator reservoir tank check and fill
- Vertically mounted, spin-on fuel filter/water separator element
- Windshield washer tank
- Lockable fill caps use the same key as all other locks

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



## 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

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





## Engine

Caterpillar 3003 naturally aspirated, watercooled, 4-stroke, 3-cylinder diesel engine.

Ratings at 2300 rpm

Net power 13.0 kW 17.4 hp

Gross power 13.7 kW 18.4 hp

### Dimensions

Bore 75 mm 3.0 in

Stroke 72 mm 2.8 in

Displacement 954 cm<sup>3</sup> 58 in<sup>3</sup>

- Net power rating per ISO 9249 or EEC 80/1269
- Meets EPA Tier I emission requirements

## Swing System

Machine swing speed (rpm) 9.7

Boom swing system with cast swing post

Left (without stop) 90°

Left (with stop) 54°

Right 50°

### Features

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

## Blade

Width 980 mm 38.6 in

- with extended undercarriage 1340 mm 52.8 in

Height of blade 250 mm 9.8 in

Dig depth 225 mm 8.9 in

Lift height 200 mm 7.9 in

### Features

- Blade flotation function provides easier operation
- Replaceable, wear resistant cutting edge
- 301.8 has pin-on blade extensions to match width to extended undercarriage
- Blade is curved and is full width of the machine.

## Hydraulic System

### Pumps/Pressures/Circuits

Pumps: three gear-type (max. delivery)

Tandem 2 × 16 lpm 2 × 4.2 gpm

Single 1 × 17 lpm 1 × 4.5 gpm

### Operating pressures

Equipment 18 600 kPa 2698 psi

Travel 18 600 kPa 2698 psi

Swing 17 200 kPa 2495 psi

### Auxiliary circuits

Primary 32 lpm @ 18 600 kPa 8.5 gpm @ 2698 psi

Secondary 16 lpm @ 18 600 kPa 4.2 gpm @ 2698 psi

### Digging Forces

Stick, standard 8.84 kN 1987.3 lb-ft

Stick, long 7.16 kN 1609.6 lb-ft

Bucket 12.65 kN 2843.8 lb-ft

### Features

- Auxiliary lines for hammer operation are standard
- Optional two-way auxiliary lines for work tools such as augers and angling ditch bucket
- Boom, stick, bucket and machine swing are pilot-controlled

## Travel System

### Travel speed

High 4.4 km/h 2.7 mph

Low 2.2 km/h 1.4 mph

### Max. traction force

High 6.4 kN 1439 lb-ft

Low 13.6 kN 3057 lb-ft

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

## Electrical System

- 55-amp alternator
- 12-volt, 500 CCA, 45 amp/h maintenance free battery
- Sealed electrical connectors

## Service Refill Capacities

	Liters	Gallons
Cooling system	4.5	1.2
Engine oil	3.5	0.9
Fuel tank	22	5.8
Hydraulic tank	20	5.3
Hydraulic system	37	9.8

## Weights\*

	301.5	301.6	301.8
Canopy	1616 kg (3563 lb)	1671 kg (3684 lb)	1746 kg (3849 lb)
Cab	1735 kg (3825 lb)	1790 kg (3946 lb)	1865 kg (4112 lb)

\* With bucket, operator, full fuel and auxiliary lines. Weight varies depending on machine configuration

## Undercarriage

H-shaped, fabricated frame.

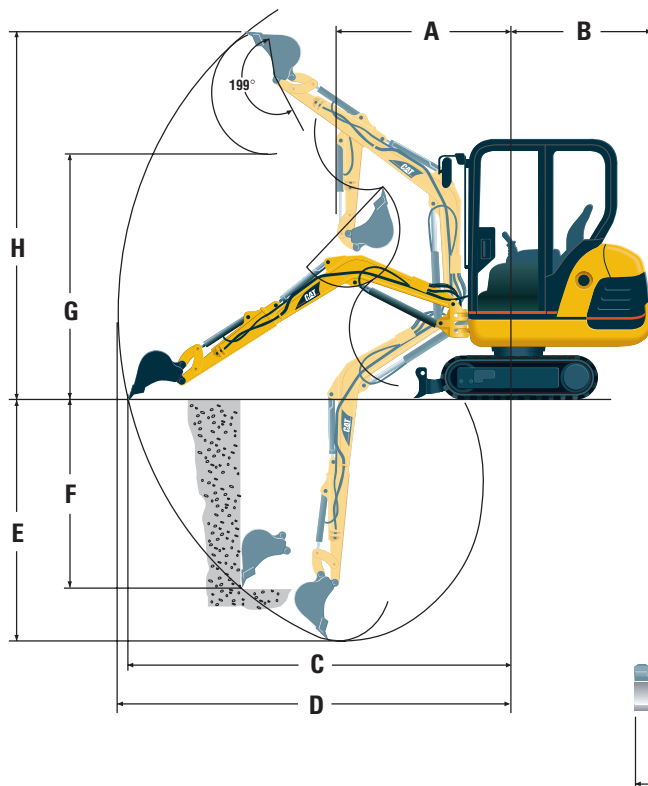
- Fabricated design gives high durability
- Tapered roller frame reduces accumulation of material in the tracks
- Track tension adjustment is accomplished through grease-filled cylinders
- 301.6 has long track base increasing fore/aft stability
- 301.8 variable width undercarriage and longer track base increase machine versatility and stability

## Sound Levels

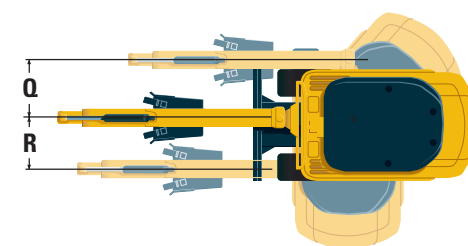
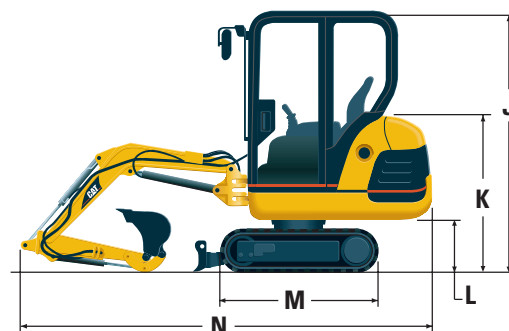
Operator sound pressure level is 83 dB(A) for cab and 80 dB(A) for canopy builds when measured per ISO 6396 (dynamic) or 95/27/EC.

## Dimensions

(approximate)



Track and blade width	980 mm	3'3"
Gauge width	750 mm	2'6"
Shoe width	230 mm	9"



	A	B	C	D	E	F	G	H	J	K	L	M*	N	O**	P**	Q	R
301.5 and 301.8																	
Standard Stick (mm)	1540	1070	3610	3700	2130	1730	2360	3320	2190	1150	460	1486	3690	980	1340	510	455
Standard Stick (ft/in)	5'0"	3'6"	11'10"	12'2"	7'0"	5'8"	7'9"	10'11"	7'2"	3'9"	1'6"	4'11"	12'1"	3'3"	4'5"	20"	18"
301.5, 301.6 and 301.8																	
Long Stick (mm)	1540	1070	3800	3890	2330	1920	2470	3420	2190	1150	460	1486	3690	980	1340	510	455
Long Stick (ft/in)	5'0"	3'6"	12'6"	12'9"	7'8"	6'4"	8'1"	11'3"	7'2"	3'9"	1'6"	4'11"	12'1"	3'3"	4'5"	20"	18"

\* Track length for 301.5 is 1390 mm (4'7") – \*\* Only for 301.8

# 301.5, 301.6 and 301.8 Mini Hydraulic Excavators

## Standard Equipment

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

Alternator, 55-amp	Lockable fuel cap
Automatic swing parking brake	Lockable storage box
Auxiliary one way (hammer) lines	Long Stick (301.6 only)
Boom cylinder guard	Maintenance-free battery
Canopy, FOPS ISO 10262 (Level I) and Tip-Over Protection ISO 12117	230 mm (9.1 in) rubber track
Coat hook	Seat, static vinyl
Control Pattern Changer	Seatbelt, 50 mm (2 in)
Dozer blade (including float function)	Standard Stick (301.5 & 301.8)
Floor mat	Travel Alarm
Gauges:	Two-speed travel
– fuel level	Variable width undercarriage – 301.8 only
– hour meter	Wrist rests
Horn	
Hydraulic oil cooler	
Indicators:	
– air cleaner	
– alternator and glow plugs	
– engine coolant temperature	
– engine oil pressure	

## Optional Equipment

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

Auxiliary two-way lines, (e.g. Auger)  
Boom check valve  
Cab, fully glazed, FOPS ISO 10262  
(Level 1), Tip-Over Protection ISO 12117 with:  
– Heater/defroster  
– Interior light  
– Windshield wiper and washer  
Foot travel pedals  
FOPS ISO 10262 (Level II) guards  
Front screen for cab and canopy  
Lights, cab mounted and boom mounted  
Long Stick (301.5 & 301.8)  
Mirrors, for cab or canopy  
Radio installation kit  
Seat Belt, 75 mm (3")  
Secondary auxiliary (e.g. clamshell bucket)  
Suspension seat, vinyl or fabric  
Tool kit  
Work Tools

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AEHQ5585 (5-04)

Replaces AEHQ5301 (301.5), AEHQ5397 (301.6), AEHQ5398 (301.8)

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

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