

304.5

Mini Hydraulic
Excavator

CAT[®]



Cat[®] 3024 Naturally Aspirated Diesel Engine

Flywheel Power	28 kW	38 hp
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Operating Weight:

With cab	4595 kg	10130 lb
With canopy	4475 kg	9866 lb

304.5 Mini Hydraulic Excavator

Built for productivity and versatility, the 304.5 is a high performance, easy to operate compact excavator with excellent serviceability and customer support.

Performance and Versatility

With fast and smooth operations, the 304.5 Mini Hydraulic Excavator delivers outstanding performance. The wide range of work tools available gives the 304.5 versatility in applications such as building construction, utilities, landscaping and demolition.

Front linkage requirements can be matched with a choice of standard or long sticks. Auxiliary hydraulic lines can be installed at the factory or in the field. The control pedal, auxiliary valve, and lines up to the swing post are standard.

The blade has a float function, allowing the 304.5 to efficiently perform clean up operations in quick time. Fast travel speeds between work areas are provided by the two-speed hydrostatic power train.

Built for tough work

The 304.5 Mini Hydraulic Excavator is built to the same high standards as larger Caterpillar® excavators. Stylish design, high quality finish and impact resistant non-metallic corner protectors help maintain the machine's high value.

Ease of Operation

Excellent visibility to the working area is provided with both the cab and canopy designs. The cab is easy to enter and is equipped with many convenience features.

Low effort controls are ergonomically designed for maximum operator comfort. **pg. 4**

Serviceability

Rapid, convenient daily maintenance is provided with the tilt-up, wide opening engine enclosure, allowing access to all major components and service points.

Low maintenance bushings used on the front linkage and blade mechanism pin joints reduce time for routine maintenance. All grease fittings can be easily reached.

The S•O•S oil sampling valve provides easy sampling of hydraulic oil for preventive maintenance. **pg. 5**



Work Tools

Caterpillar buckets and hydraulic powered tools, matched to fit the 304.5 Mini Hydraulic Excavator.

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 the 304.5 Mini Hydraulic Excavator. Built for performance and durability, the full range of mini hydraulic excavator work tools delivers high productivity, long service life and excellent value.

- Digging Buckets
- Ditch Cleaning Buckets
- Hydraulic Hammers
- Augers
- Shears
- Crusher

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's Station

Comfortable, world class cab and unmatched ease of operation.



Low effort pilot hydraulics and ergonomically designed controls minimize fatigue and maximize comfort for the operator. There is a control pattern changer available as an option. The automatic swing lock helps ensure that the superstructure is held in a secure position while transporting the machine.

Straight line travel is provided to maintain a straight course while tracking and operating the front linkage simultaneously. The console serves as a hydraulic system lockout when raised, preventing use of all hydraulic functions.

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

- Fresh air filtered heater and defroster, providing heating at variable temperatures and blower speeds
- 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
- Suspension seat, vinyl or fabric covered



Excellent visibility to the work tool and machine surroundings is provided by the large glass area. The operator's all-round field of view is maximized by the superior cab design and the low hood to the rear.

Ventilation is given by the gas strut assisted front window, removable lower-front window and sliding right-side windows.

Serviceability

Wide opening, spacious engine enclosure allows easy access for maintenance and servicing on the 304.5 Mini Hydraulic Excavator.

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

Sight gauges for hydraulic oil and fuel make fluid level checks convenient. Lockable tank cover uses the same key as all other locks.

Low maintenance bushings in front linkage pin joints and blade mechanism extend greasing intervals. All grease fittings are easy to access.

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

Cost effective replacement parts are available through a service exchange program. Many parts are interchangeable with other Cat machines.



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 3024 naturally aspirated, watercooled, 4-stroke, 4-cylinder diesel engine.

The following ratings apply at 2300 rpm when tested under the specific standard conditions for the specified standard:

Gross power	kW	hp
SAE J1995	29	39
Net power	kW	hp
Caterpillar	28	38
ISO 9249	27	36
SAE J1349	27	36

Dimensions

Bore	84 mm	3.15"
Stroke	100 mm	3.94"
Displacement	2216 cm ³	135.2 in ³

Travel System

Travel speed:

High	4.7 km/h	2.9 mph
Low	2.8 km/h	1.7 mph

Traction force (max.)

High	21 kN	4721 lb
Low	39 kN	8767 lb

Gradeability (max.) 30°

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

Sound Levels

Operator sound pressure level is 82 dbA for cab and 80 dbA for canopy equipped machines when measured per ISO 6396 (dynamic) or 95/27/EC.

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
- Trackshoe width is 400 mm (15.7") for both standard rubber and optional steel shoes
- Ground clearance is 330 mm (13")
- Four bottom rollers and one carrier roller on each side

Weights

With rubber tracks, bucket, operator, full fuel and auxiliary lines.

(Weight varies depending on machine configuration).

Cab	4595 kg	10130 lb
Canopy	4475 kg	9866 lb

Electrical System

12-volt system.

- 55-amp alternator
- 12-volt, 650 CCA, 55 amp/hr maintenance free battery
- Sealed electrical connectors

Hydraulic System

- Auxiliary valve, lines to the swing post and foot pedal are standard
- Optional auxiliary hydraulic lines are available
- Secondary optional auxiliary line uses the bucket cylinder hydraulic circuit
- Boom, stick, bucket and machine swing are pilot-controlled

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

Piston	2 x 49.1 lpm	2 x 13 gpm
Gear	39.1 lpm	10.3 gpm

Operating pressures

Equipment	230 bar	3336 psi
Travel	230 bar	3336 psi
Swing	186 bar	2698 psi

Auxiliary circuit (max. delivery) 88 lpm at 230 bar 23.2 gpm at 3336 psi

Digging forces:

Stick (standard)	2345 kgf	5171 lb
Stick (long)	1978 kgf	4361 lb
Bucket	4028 kgf	8880 lb

Swing System

Hydraulic motor-driven.

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

Machine swing speed 8.5 rpm

Boom swing system with cast swing post:

Left (without stop)	90°
Left (with stop)	42°
Right	50°

Service Refill Capacities

	liters	gallons
Cooling system TAG	6.3	1.7
Engine oil	7.4	2.0
Fuel tank	55	14.5
Hydraulic tank	56	14.8
Hydraulic system	85	22.5

Blade

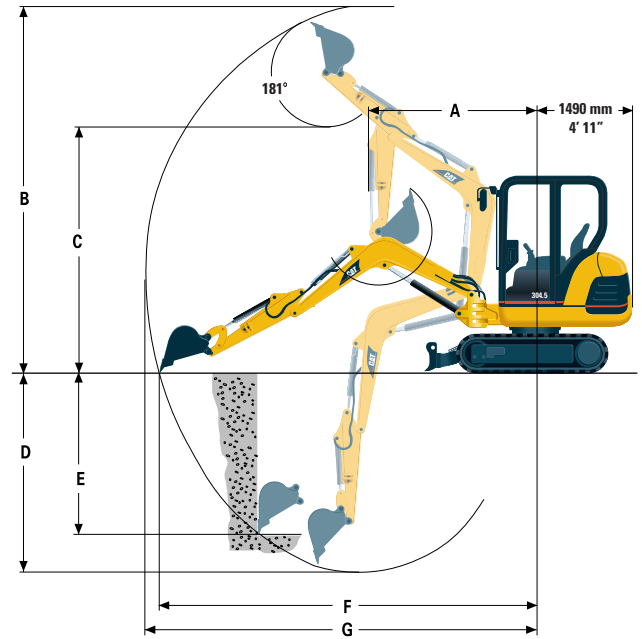
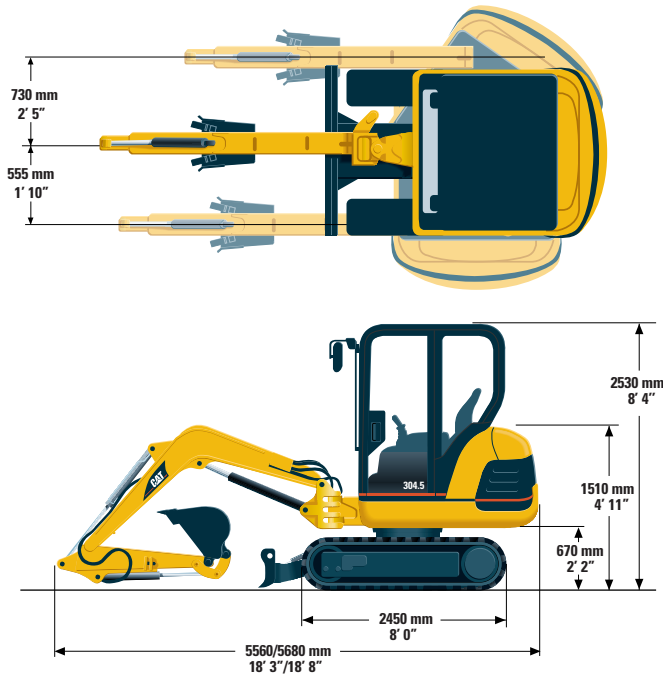
Blade is full width of the machine.

Width	1900 mm	74.8"
Height of blade	370 mm	14.6"
Dig depth	360 mm	14.2"
Lift height	420 mm	16.5"

Dimensions

(approximate)

Track and blade width	1900 mm	74.8"
Gauge width	1500 mm	59.1"
Shoe width	400 mm	15.7"



	A	B	C	D*	E*	F	G
Standard stick	2030 mm 6' 8"	5680 mm 18' 8"	4020mm 13' 2"	3530 mm 11' 7"	2690 mm 8' 10"	5670 mm 18' 7"	5810 mm 19' 1"
Long stick	2250 mm 7' 5"	5940 mm 19' 6"	4280 mm 14'	3930 mm 12' 11"	3080 mm 10' 1"	6050 mm 19' 10"	6180 mm 20' 3"

* Dig depth with tracks level on the ground.

Standard Equipment

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

- | | |
|--|------------------------------------|
| Alternator, 55-amp | Horn |
| Automatic swing parking brake | Hydraulic oil cooler |
| Auxiliary hydraulic circuit with valve, controls and lines to the swing post | Lockable tank cover |
| Boom cylinder guard | Lockable storage box |
| Canopy with FOPS per ISO 10262 | Low maintenance linkage pin joints |
| Level I and TOPS per ISO 12117 | Maintenance-free battery |
| Coat hook | Rubber track, 400 mm (15.7 in) |
| Dozer blade with float function | Seatbelt, 50 mm (2 in) wide |
| Floor mat | Standard stick |
| Gauges or indicators for fuel level, engine coolant temperature, hour meter, engine oil pressure, air cleaner, alternator and glow plugs | Suspension seat, vinyl covered |
| | Two-speed travel |
| | Wrist rests |

Optional Equipment

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

- Auxiliary hydraulic lines, front linkage
- Biodegradable hydraulic oil
- Boom check valve
- Cab, fully glazed with FOPS per ISO 10262 Level 1, TOPS per ISO 12117, heater/defroster, interior light and windshield wiper/washer
- Control pattern changer
- Ecology drain valve for hydraulic tank
- Foot travel pedals
- Front screen for cab and canopy
- Lights, cab mounted and boom mounted
- Long stick
- Mechanical Quick Coupler
- Mirrors, for cab or canopy
- Radio installation kit
- Seatbelt, 75 mm (3 in) wide
- Steel tracks, 400 mm (15.7 in)
- Suspension seat, fabric covered
- Tool kit
- Travel alarm
- Work tools

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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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