304 CR
Mini Hydraulic Excavator



Engine Power		
Gross	27.3 kW	37 hp
Net	26.5 kW	36 hp
Maximum Operating Weight		
With cab	4490 kg	9896 lb
With canopy	4440 kg	9786 lb

304 CR Mini Hydraulic Excavator

Designed and built by Caterpillar® to deliver exceptional performance, versatility and productivity. Easy to operate in confined job sites and backed by the Caterpillar commitment to serviceability and customer support.

Performance and Versatility

The Caterpillar 304 CR Mini Hydraulic Excavator is 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.

High bucket and stick forces combined with fast, smooth hydraulics ensure optimum performance and versatility.

Standard and long sticks are available for a variety of applications. Optional auxiliary lines provide full machine utilization. **pg. 4**

Ease of Operation

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

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

An optional control pattern changer allows the operator to easily change between backhoe and excavator digging patterns, further increasing the 304 CR's versatility. **pg. 5**

Serviceability

Simple convenient daily maintenance is provided with the tilt-up, wide engine enclosure that allows 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 reduce routine maintenance time. All grease fittings can be easily reached.

S•O•S℠ oil sampling valves provide easy sampling of hydraulic oil. **pg. 4**

Built for tough work

The 304 CR Mini Hydraulic Excavator is built to the same high standard as larger Caterpillar excavators. A stylish and innovative design means that the upper structure swings within the undercarriage width offering the optimum performance in the tightest applications.*

* Without additional counterweight



Work Tools

Caterpillar buckets and hydromechanical tools matched to the 304 CR Mini Hydraulic Excavator.

Customer Support

Caterpillar dealers offer unmatched customer support with excellent equipment 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

The 304 CR Mini Hydraulic Excavator utilizes work tools that are 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
- Shears
- Crushers

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 304 CR has been designed to deliver exceptional performance providing optimum versatility and productivity.

The **compact radius** of the 304 CR's upper structure lies within the width of the undercarriage, allowing unrestricted operation when working next to obstacles.

- 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 means the 304 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 enable effective site clearing, which is further enhanced by the dozer blade float function



Serviceability

Spacious engine enclosure and wide, tilt up engine enclosure allow easy access for maintenance and service.

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
- Large Caterpillar fuel filter and water separator protect the engine and ensure efficient operation
- 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 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.

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 opens easily
- Front window wiper and washer for a clear view
- Radio ready cab
- Flat floor allows easy sweep out
- Optional front window guards

Excellent viewing area to the work tool and machine surroundings results from the offset boom and compact upper structure.

- Dozer blade is visible from all swing angles for maximum convenience
- Polycarbonate skylight provides an added view to high boom positions

Full controllability comes from the low-effort, ergonomically designed, pilot hydraulic levers.

- Seat adjusts relative to controls to suit different operators and applications
- All controls are pilot hydraulic operated, including front linkage, travel, dozer and auxiliary
- Optional control pattern changer for quick selection of excavator or backhoe controls

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

- Fully adjustable reclining suspension seat
- Low operator and spectator sound levels
- Cab includes heater and optional air conditioner for maximum comfort in a range of climatic conditions



Customer Support

Complete service 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 help optimize machine performance and reliability. Services include:

- Customer Support Agreements
- Maintenance contracts
- Scheduled technical inspections



Equipment management services help optimize profits. Services include:

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

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

Engine

Mitsubishi S4L2-E2 naturally aspirated, watercooled, four stroke, four cylinder, diesel engine.

Ratings at 2400 rpm	kW	hp
Gross Power		
SAE J1995	27.3	37
Net Power		
ISO 9249	26.5	36
SAE J1349	26.5	36

Dimensions

Bore	78 mm	3.07 in
Stroke	92 mm	3.62 in
Displacement	1760 cm^3	107 in^3

- 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°

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 × 43.4 L/min	9.5 gpm
Gear	1 × 40.7 L/min	8.9 gpm
Pilot	1 × 10.5 L/min	2.3 gpm
Operating pressures		
Linkage	245 bar	3550 psi
Travel	245 bar	3550 psi
Swing	206 bar	2990 psi
Auxiliary circuit (maximum)		
Flow	84.1 L/min	18.5 gpm
Pressure	245 bar	3550 psi
Digging forces (at cutting edge)		
Bucket	36.6 kN	8228 lbf
Standard stick	23.9 kN	5373 lbf
Long stick	20.9 kN	4699 lbf

- 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

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
- Four bottom rollers and one top roller per side
- Ground clearance 335 mm (13 in)

Travel System

Travel speed		
High	4.6 km/h	2.9 mph
Low	2.6 km/h	1.6 mph
Traction force		
	41.2 kN	9260 lbf

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

Swing System

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

Machine swing speed	9.3 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 slopes and during machine transportation

Cab and Canopy

- Both cab and canopy structures meet FOPS, ISO 10262 (Level 1) and TOPS, ISO 12117
- Tinted cab glass 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

Weights

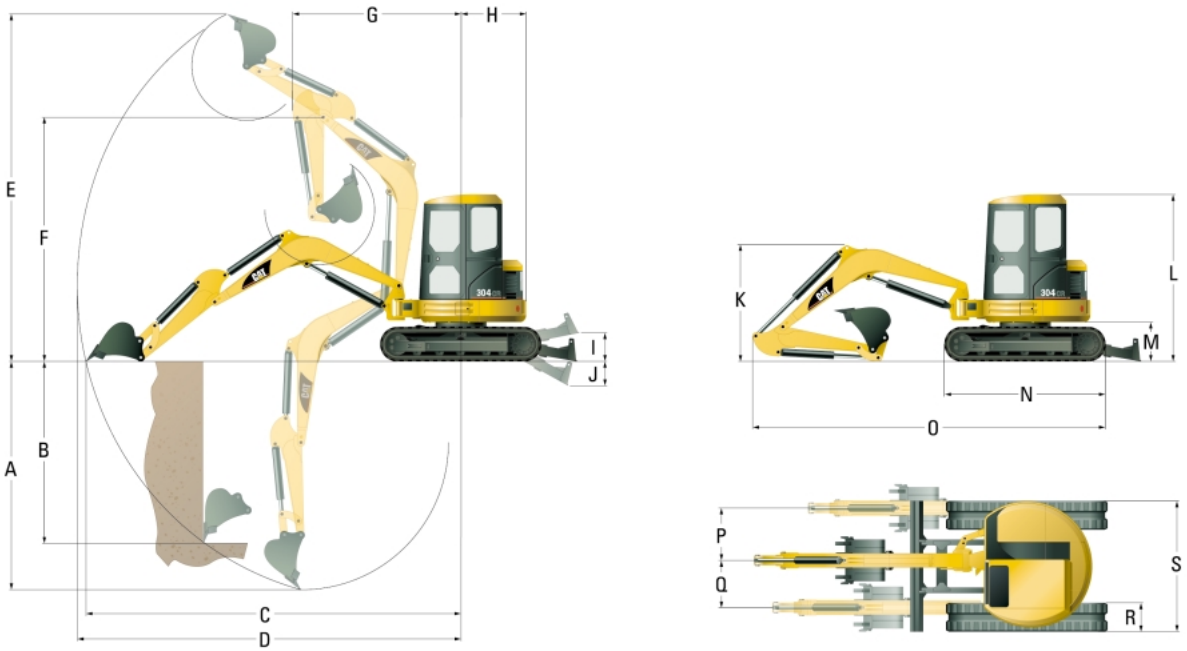
With rubber track, bucket, operator and additional counterweight 190 kg (418 lb). Weights vary depending on machine configuration.

Cab	4490 kg	9896 lb
Canopy	4440 kg	9786 lb

Service Refill Capacities

	Liters	Gallons
Cooling system	6.0	1.58
Engine oil	8.4	2.2
Fuel tank	62	16
Hydraulic tank	70	18
Hydraulic system	91	24

Dimensions and Working Range



		A	B	C	D	E	F	G	H*	I	J	K	L	M
Standard Stick	**(mm)**	3350	2840	5560	5710	5220	3580	2470	990	450	430	1720	2595	625
	(ft/in)	11'0"	9'4"	18'3"	18'9"	17'2"	11'9"	8'1"	3'3"	1'6"	1'5"	5'8"	8'6"	2'1"
Long Stick	**(mm)**	3750	3240	5950	6080	5440	3810	2470	990	450	430	2070	2595	625
	(ft/in)	12'4"	10'10"	19'6"	19'11"	17'10"	12'6"	8'1"	3'3"	1'6"	1'5"	6'8"	8'6"	2'1"

		N	O	P	Q	R	S
Standard Stick	**(mm)**	2450	5180	910	650	400	1980
	(ft/in)	8'0"	17'0"	3'0"	2'2"	1'4"	6'6"
Long Stick	**(mm)**	2450	5280	910	650	400	1980
	(ft/in)	8'0"	17'4"	3'0"	2'2"	1'4"	6'6"

*Additional counterweight increases this dimension by 100 mm (4 in).

Standard Equipment

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

- Automatic swing parking brake
- Boom cylinder guard
- Boom drift reduction valve
- Canopy to TOPS and FOPS standards
- Double element air filter
- Dozer blade with float function
- Floor mat
- Gauges/indicators for fuel, engine oil pressure and coolant temperature, air cleaner, alternator and glow plugs
- Hour meter
- Low maintenance linkage joints
- Maintenance free battery
- Rubber tracks
- Seatbelt, 50 mm (2 in) wide
- Standard stick
- Two speed travel
- Vinyl suspension seat

Optional Equipment

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

- Additional counterweight, 190 kg (418 lb)
- Air conditioner
- Auxiliary hydraulic lines for front linkage
- Boom mounted lights
- Cab, fully glazed to TOPS and FOPS standards with heater, interior light, front window washer/wiper and radio-ready kit
- Cab/canopy mounted lights
- Control pattern changer
- Fabric Suspension seat
- Front screen guard for cab and canopy
- Long stick
- Mechanical quick coupler
- Seatbelt, 75 mm (3 in) wide
- Steel tracks
- Travel alarm
- Travel foot pedals
- Work tools

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Featured machines in photos may include additional equipment.
See your Caterpillar dealer for available options.

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