

303 CR

Mini Hydraulic
Excavator



Engine Power

Gross	20.2 kW	27.1 hp
Net	19.5 kW	26.1 hp

Maximum Operating Weight

With cab	3420 kg	7524 lb
With canopy	3330 kg	7326 lb

303 CR Mini Hydraulic Excavator

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

Performance and Versatility

The Cat® 303 CR Mini Hydraulic Excavator has been designed to deliver exceptional performance providing optimum versatility and productivity.

The 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. Auxiliary lines are also available providing full machine utilization. **pg. 4**

Built for tough work

The 303 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 of applications.*

* Without additional counterweight

Ease of Operation

A spacious cab with sliding door design provides easy entry and exit in confined jobsites.

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 303 CR's versatility. **pg. 5**

Serviceability

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

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

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



Work Tools

Caterpillar buckets and hydromechanical tools matched to the 303 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 303 CR Mini Hydraulic Excavator utilizes work tools which have been 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 Cat Quick Coupler maximizes work tool performance while allowing the operator to change work tools efficiently.



Performance and Versatility

The Cat 303 CR has been designed to deliver exceptional performance providing optimum versatility and productivity.

The **compact radius** of the 303 CR's upper structure lies within the width of the undercarriage allowing unrestricted operation 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 303 CR is capable of performing 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 enables effective site clearing, which is further enhanced by the dozer float function



Serviceability

Spacious engine enclosure and wide tilt up engine enclosure allows 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
- 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 its sliding door.

- Tinted glass reduces glare and heat build-up
- Gas strut assisted front window for easy opening
- Front window wiper and washer for a clear view
- Cab is radio ready
- The flat floor allows easy sweep-out
- Optional front window guards

Excellent visibility to the work tool and machine surroundings is provided by the offset boom and compact upper structure.

- The dozer blade is visible from all swing angles for maximum convenience
- A polycarbonate skylight provides additional visibility at high boom positions

Full controllability is provided by the low effort, ergonomically designed pilot hydraulic levers.

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

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

- Fully adjustable reclining suspension seat
- Low operator and spectator sound levels
- The cab includes heater with filter and front window defrost



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
- 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
- Extended warranties

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

Engine

Mitsubishi S3L2 Y1 naturally aspirated, watercooled, 4-stroke, 3 cylinder diesel engine.

Ratings at 2400 rpm	kW	hp
Gross Power		
SAE J1995	20.2	27.1
Net Power		
ISO 9249	19.5	26.1
SAE J1349	19.5	26.1

Dimensions

Bore	78 mm	3.07 in
Stroke	92 mm	3.62 in
Displacement	1320 cm ³	80.5 in ³

- Meets U.S. 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 × 34.9 l/min	9.2 gpm
Gear	1 × 24.9 l/min	6.6 gpm
Pilot	1 × 11.9 l/min	3.1 gpm

Operating pressures		
Equipment	245 bar	3550 psi
Travel	245 bar	3550 psi
Swing	245 bar	3550 psi

Auxiliary circuit (maximum)		
Flow	59.8 l/min	15.8 gpm
Pressure	245 bar	3550 psi

Digging forces (at cutting edge)		
Bucket	26.2 kN	6000 lb-ft
Standard stick	17.0 kN	3822 lb-ft
Long stick	15.5 kN	3484 lb-ft

- 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	1.7 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 310 mm (12 in)

Travel System

Travel speed		
High	4.8 km/h	2.98 mph
Low	2.7 km/h	1.68 mph

Traction force		
	30 kN	6750 lb-ft

- Compact drive modules within track width for protection
- Straight-line travel when tracking and operating the front linkage together
- Counter balance valves built-in 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	9.6 rpm
Boom swing angles	
Left with stop	65°
Left without stop	90°
Right	50°

- Piston motor driven system for positive swing force
- Self lubricating swing speed reduction gear
- Grease bath lubricated pinion
- Automatic, spring applied parking brake prevents swing drift on a slope

Cab and Canopy

- Both cab and canopy structures are to FOPS, ISO 10262 (level 1) and to TOPS, ISO 12117
- Cab glass tinted with front window washer standard
- Flat floor with rubber matting
- All major controls including front linkage, travel and auxiliary are hydraulic pilot operated
- All hydraulic controls are isolated including the travel function by lift up console

Weights

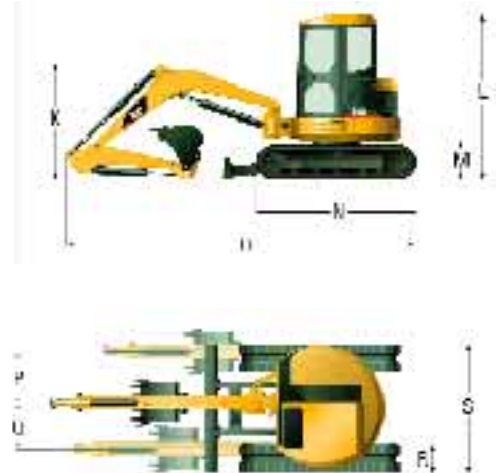
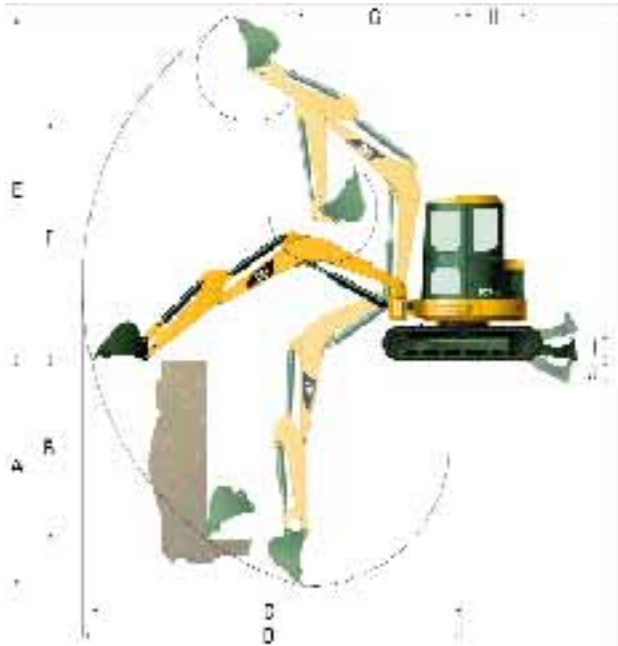
With rubber track, bucket, operator and additional counterweight, 220 kg (484 lb). Weights vary depending on machine configuration.

Cab	3420 kg	7524 lb
Canopy	3330 kg	7326 lb

Service Refill Capacities

	Liters	Gallons
Cooling system	3.5	1.5
Engine oil	5.9	1.5
Fuel tank	42	10.9
Hydraulic tank	30	7.8
Hydraulic system	70	18.2

Dimensions and Working Range



	A	B	C	D	E	F	G	H*	I	J	K	L	M
Standard Stick (mm)	3030	2540	5130*	5250	4640	3150	2310	775	410	380	1420	2480	570
(ft/in)	9'11"	8'4"	16'10"	17'3"	15'3"	10'4"	7'7"	2'7"	1'4"	1'3"	4'8"	8'2"	1'10"
Long Stick (mm)	3330	2720	5390	5500	4710	3240	2360	775	410	380	1760	2480	570
(ft/in)	10'11"	8'11"	17'8"	18'0"	15'5"	10'8"	7'9"	2'7"	1'4"	1'3"	5'9"	8'2"	1'10"
	N	O	P	Q	R	S							
Standard Stick (mm)	2070	4680	800	620	300	1550	*Additional counterweight increases this dimension by 80 mm (3 in).						
(ft/in)	6'9"	15'4"	2'7"	2'0"	1'0"	5'1"							
Long Stick (mm)	2070	4740	800	620	300	1550							
(ft/in)	6'9"	15'7"	2'7"	2'0"	1'0"	5'1"							

Standard Equipment

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

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

Optional Equipment

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

Additional counterweight, 220 kg (484 lb)	Control pattern changer
Auxiliary hydraulic lines for front linkage	Fabric suspension seat
Boom check valve	Front screen guards for cab and canopy
Boom mounted lights	Long stick
Cab, fully glazed to FOPS and TOPS standards with heater/defroster, interior light, front window washer/wiper and radio ready kit	Mechanical quick coupler
Cab/canopy mounted lights	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.
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