

CS-323C CP-323C

Vibratory Soil
Compactors



Cat® 3054C Diesel Engine

Gross Power	62 kW	83 hp
Drum Width	1270 mm	50"
Centrifugal Force	66.8 kN	15,000 lb
Vibratory Frequency	35 Hz	2100 vpm

Operating Weight

CS-323C	4390 kg	9,680 lb
CP-323C	4620 kg	10,190 lb

CS-323C and CP-323C Soil Compactors

Ideally-sized for small compaction jobs or working in tight areas such as trenches or job sites with limited space.

Vibratory System

An industry-proven eccentric weight design combined with high amplitude and frequency delivers superior compaction in the fewest number of passes.

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Engine

Caterpillar® 3054C diesel engine delivers 62 kW (83 hp) and is built for performance and reliability without sacrificing fuel economy.

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Propel System

The single pump propel system with flow divider provides balanced hydraulic flow to both the rear drive axle and the front drum drive motor to minimize drum and wheel spin-out in low traction conditions. (Flow divider is optional on CS-323C without a blade.)

This system enables the operator to achieve good gradeability and machine control while compacting on a grade or using the optional leveling blade.

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Operator's Station

The 300C-Series Soil Compactors feature exceptional operator comfort and visibility. A propel lever, grouped control gauges and conveniently located control switches enhance operator productivity and reduce operator fatigue. Four heavy-duty isolation mounts provide a smooth ride. A new steering wheel with integrated center horn function and steering knob helps reduce operator fatigue. The operator's platform is enclosed by handrails and features angled foot rests for sure footing when working on a grade. A ROPS/FOPS canopy with a rear view mirror is standard.

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Versatility

Narrow machine width of 1.39 m (4' 6") is ideal for working in trench applications or job sites with limited space. The machine weight is good for light compaction of uniform layers over sewer and water pipes.

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The optional leveling blade increases machine utilization to tackle backfilling, material knockdown and light dozing applications.

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Serviceability

Daily check points are accessible from ground level. The optional hinged side access doors open wide for easy access to engine components. The operator's station tilts forward to provide access to the hydraulic pumps. The engine lubrication change interval is 500 hours.

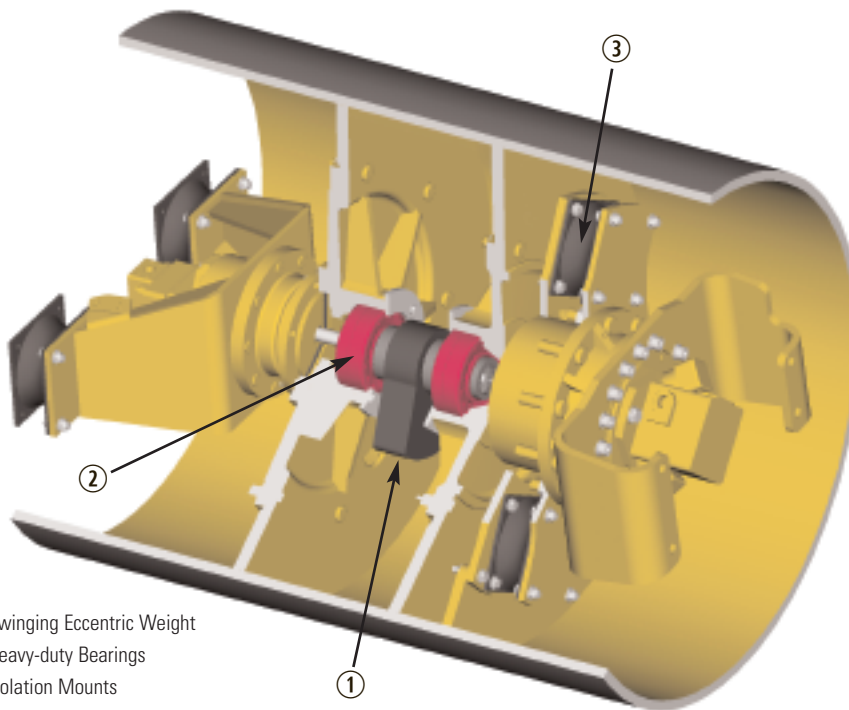
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Performance and reliability you can depend on.

Durable field-proven powertrain and vibratory systems, production enhancing options and the world's largest and most dedicated dealer support system ensure the CS-323C and CP-323C Soil Compactors will provide maximum compaction performance and value.

Vibratory System

Industry-proven drum design delivers superior compactive force and high reliability.



- 1 Swinging Eccentric Weight
- 2 Heavy-duty Bearings
- 3 Isolation Mounts

High centrifugal force and amplitude provides superior compactive effort and exceptional productivity.

Vibratory frequency of 35 Hz (2100 vpm) combined with optimal drum weight, enables the operator to achieve density in fewer passes.

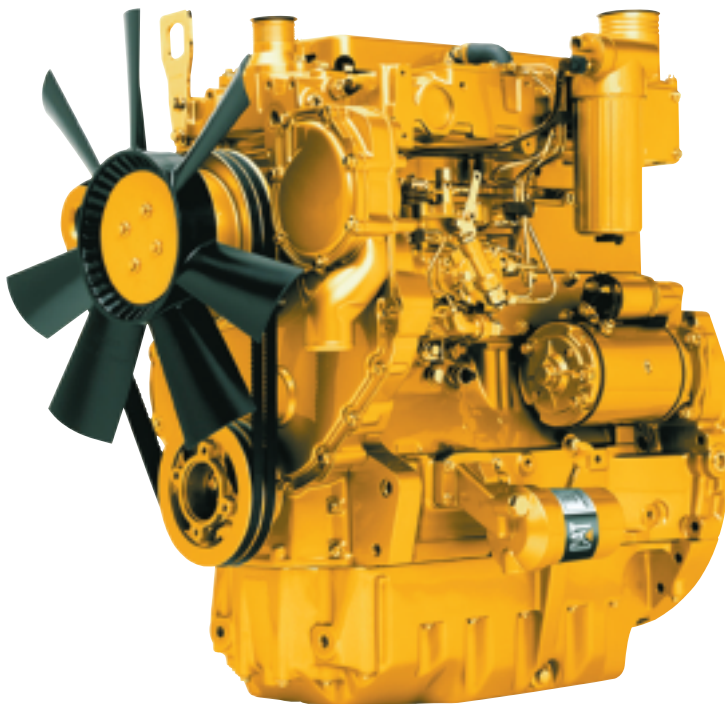
Large heavy-duty bearings for the eccentric weight shaft designed for high compactive forces.

1 year/1000 hour vibratory bearing lube service interval reduces maintenance.

Heavy-duty isolation mounts allow more force to be transmitted to the ground and less vibration to the drum yoke.

Caterpillar 3054C Series Diesel Engine

High-tech four cylinder engine provides outstanding durability, performance, reliability and operating economy.



Adjustment-free direct injection fuel system provides individually metered high-pressure, direct injection of fuel for maximum efficiency.

Large engine oil cooler reduces oil deterioration and varnishing of internal components. Allows for 500 hour engine oil change intervals.

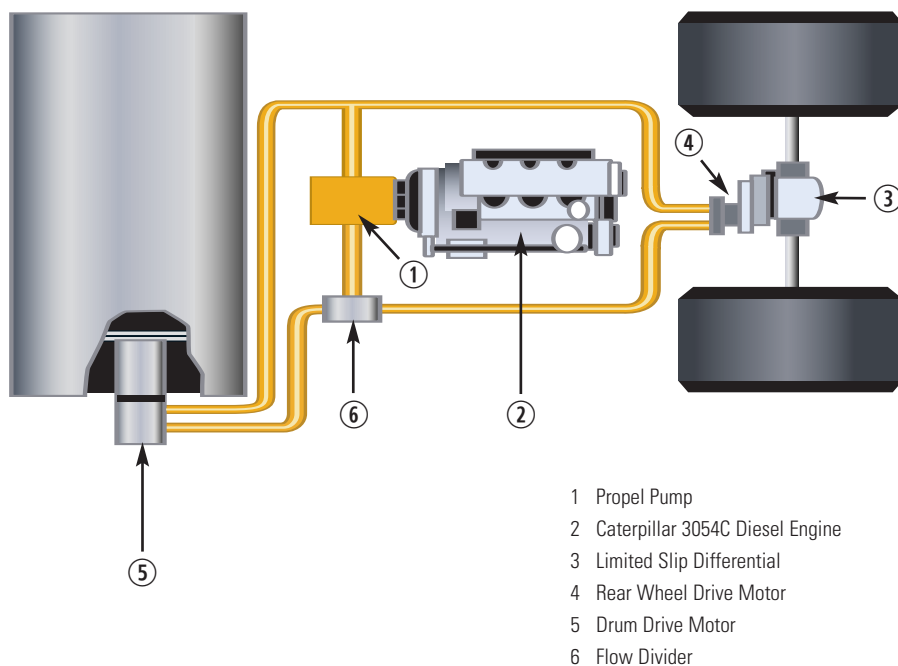
Low-mounted oil pump for quicker start-up lubrication.

Combination fuel filter and water separator offers superior protection for the fuel injection system.

Engine meets U.S. EPA Tier 2 and European EU Stage II emissions control standards worldwide.

Efficient Propel System

High tractive effort and gradeability for outstanding productivity, machine control and utilization.



Single propel pump with flow divider provides separate, balanced hydraulic flow to the rear wheel axle and the drum drive motors. Provides high gradeability and increases tractive effort in loose or poor underfoot conditions. (Flow divider is optional on CS-323C without a leveling blade.)

Limited slip differential provides balanced tractive effort and smooth torque transfer to both rear wheels.

Infinitely variable speed range for maximum torque when using the leveling blade or grade climbing, plus the ability to move quickly over longer distances.

Flushing valves in each propel circuit help keep hydraulic oil cool and clean for maximum system efficiency.

High travel speed up to 8.9 km/h (5.5 mph).

Operator's Station with ROPS/FOPS Canopy

Designed for simple control, comfort and productivity. The platform is equipped with a ROPS/FOPS canopy and is enclosed by handrails and features foot rests for sure footing.



Single lever control for propel and vibratory On/Off provides simple and low effort operation.

Easy to reach propel lever located to the right of the operator's seat for convenient and accurate machine control.

Operational gauges are located on the steering console for easy reference when operating.

Unrestricted visibility to the drum and tire edge and to the side and rear of the machine.

Comfortable and durable adjustable seat with flip-up arm rests and 76 mm (3") wide retractable seat belt.

Isolated operator's station with heavy-duty rubber mounts reduce machine vibration transmitted to the operator.

Compact Size for Specific Applications

Features and benefits designed specifically for utility construction with narrow working widths like trench compaction or job sites with limited space.



Narrow machine width of 1.39 m (4' 6") is ideal for working in trench applications or job sites with limited space.

Machine weight is good for light compaction of uniform layers over sewer and water pipes.

Propel system allows the operator to stop, maintain machine position and change directions while on a grade.

Short turning radius for good maneuverability in confined work areas.

Padfoot drum features involuted pads in shape to walk out of the lift without fluffing or "kicking up" the soil around the pads. Pads are tapered to help clean themselves. Heavy-duty scrapers mounted on the front of the drum are individually adjustable and replaceable. Helps to reduce excessive material build up between the pads.

Leveling Blade

Leveling blade option increases machine versatility and utilization, plus greatly enhances productivity.



Expands machine versatility and utilization for use in material knockdown, site leveling, trench backfilling and light dozing applications.

Single lever blade control located to the right of the operator's seat for simple and convenient operation.

Efficient propel system combined with ample engine horsepower provides plenty of power and tractive effort for effective blade use without drum spin.

Two-piece reversible and replaceable cutting edges increase edge service life and reduce replacement costs.

High mounting point provides superior curb and obstruction clearance.

Reliability and Serviceability

Reliability and serviceability are integrated into every Caterpillar Soil Compactor. These important features keep your machine investment profitable.



Visual indicators allow easy check of radiator coolant, hydraulic oil tank level and air restriction indicator.

Operator's station tilts forward to allow convenient access to the hydraulic pumps.

Rear mounted cooling system provides easy access for cleaning. Hydraulic oil cooler tilts rearward for additional access to the radiator.

500 hour engine oil change interval.

1 year/1000 hour vibratory bearing lube service interval for reduced maintenance.

Quick-connect hydraulic test ports simplify system diagnostics.

Ecology drains provide an environmental method to drain fluids. They are included on the radiator, engine oil pan, hydraulic and fuel tank.

S•O•SSM ports allow for simple fluid collection of engine oil, engine coolant and hydraulic oil.

Secure hose routing with polyethylene routing blocks to reduce rubbing and increase service life.

Nylon braided wrap and all-weather connectors ensure electrical system integrity. Electrical wiring is color-coded, numbered and labeled with component identifiers to simplify troubleshooting.

Maintenance-free Caterpillar batteries are mounted in the rear of the machine and are accessible through the swing out rear grill. Cat batteries are specifically designed for maximum cranking power and protection against vibration.

Machine is Product Link wire-ready. The Caterpillar Product Link System (CPLS) ensures maximum uptime and minimum repair costs by simplifying tracking of equipment fleets. Provides automatic machine location and hour updates. Can be obtained through your local Caterpillar dealer.



Daily service points are accessible from ground level and are grouped on one side of the engine. The optional hinged side access doors open wide for easy access to engine components.

Drum and Vibratory System Specifications

Drum width	1270 mm	50"
Drum shell thickness	20 mm	0.78"
Drum diameter	1016 mm	40"
Drum diameter (over pads) CP-323C	1016 mm	40"
Pads (CP-323C only)		
Number of pads	88	
Pad height	88 mm	3.5"
Pad face area	79.3 cm ²	12.3 in ²
Number of chevrons	11	
Eccentric weight drive	Hydrostatic	

Weight at Drum (with ROPS/FOPS canopy)

CS-323C	2040 kg	4,500 lb
CP-323C	2210 kg	4,870 lb

Static Linear Load*

CS-323C	16 kg/cm	90 lb/in
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*Meets NFP 98736 class: VM2

Frequency

Standard	35 Hz	2100 vpm
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Nominal Amplitude

High	1.3 mm	0.05"
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Centrifugal Force @ 35 Hz (2100 vpm)

Maximum	66.8 kN	15,000 lb
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Engine

Four-stroke, four cylinder Caterpillar 3054C naturally aspirated diesel engine. Meets U.S. EPA Tier 2 and European EU Stage II emissions control standards worldwide.

Ratings at	RPM	kW	hp
Gross power	2200	62	83

Ratings of Caterpillar machine engines are based on standard air conditions of 25°C (77°F) and 100 kPa (29.61" Hg) dry barometer. Power is based on using API gravity of 35 at 15°C (60°F), fuel having a LHV of 42 780 kJ/kg (18,390 Btu/lb) used at 30°C (86°F) [ref. a fuel density of 838.9 g/L (7.001 lb/U.S. gal)]. Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler and alternator.

The following ratings apply at 2200 RPM when tested under the specified standard conditions:

Net Power	kW	hp
EEC 80/1269	59	80
ISO 9249	59	80
SAE J1349	59	80

Dimensions

Bore	105 mm	4.13"
Stroke	127 mm	5"
Displacement	4.4 liters	269 cu. in.

Dual-element, dry-type air cleaner with visual restriction indicator, plug plug starting aid and fuel/water separator are standard.

Transmission

A variable displacement piston pump supplies pressurized flow to single-speed piston motor driving the rear axle and a single-speed piston motor driving the drum.

A flow divider (optional on the smooth drum model without a blade) splits the hydraulic flow between the wheel drive motor and the drum drive motor. If either the drum or wheels begin to slip, the flow divider restricts flow to the spinning drive motor and routes the additional oil flow to the other motor to keep the machine moving.

A single propel lever located on the control console provides smooth hydrostatic control of the machine's infinitely variable speeds in both forward and reverse.

Max. speeds (forward and reverse):

8.9 km/h - 5.5 mph

Final Drives and Axle

Final drive is hydrostatic with gear reducer to the drum and hydrostatic with differential and planetary gear reduction to each wheel.

Axle:

Heavy-duty fixed rear axle with a limited slip differential for smooth and quiet torque transfer.

Axle width 1.27 m (4' 2")

Tires:

CS-323C: 11.2" x 24" 6-ply flotation

CP-323C: 11.2" x 24" 8-ply traction

Operator and Machine Protective Equipment

Roll Over Protective Structure/Falling Object Protective Structure (ROPS/FOPS) canopy is a two-post structure that bolts directly onto flanges welded to the operator platform. The structure meets SAE J1040 and SAE J231, ISO 3449 and ISO 3471.

Backup Alarm — 107 dB(A) alarm sounds whenever the machine is in reverse.

Forward Warning Horn — located on the front of machine to alert ground personnel.

Seat Belt — 76 mm (3") wide seat belt is standard.

Instrumentation

The instrument panel is located in front of the operator and features a warning system that constantly monitors various machine systems; alerts the operator if a problem does occur with a light and an audible warning horn. Warning system includes: Low Engine Oil Pressure, High Engine Coolant Temperature, High Hydraulic Oil Temperature and Low Charge System Pressure. Instrumentation also includes an Alternator Malfunction Light, Start Aid Switch, Service Hour Meter and Fuel Gauge.

Operating Weights

Weights shown are approximate and include lubricants, coolant, full fuel and hydraulic tanks and a 80 kg (175 lb) operator.

Machine Weights	CS-323C		CP-323C	
with ROPS/FOPS canopy	4390 kg	9,680 lb	4620 kg	10,190 lb
equipped with leveling blade	4710 kg	10,380 lb	4940 kg	10,890 lb

Weight at Drum

with ROPS/FOPS canopy	2040 kg	4,500 lb	2210 kg	4,870 lb
equipped with leveling blade	2470 kg	5,450 lb	2640 kg	5,820 lb

Steering

A priority-demand hydraulic power-assist steering system provides smooth low-effort steering. The steering system has priority over other other hydraulic functions.

Minimum turning radius:

Inside	2.62 m	(8' 7")
Outside	3.89 m	(12' 2")

Steering angle:

(each direction)	$\pm 38^\circ$
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Oscillation angle:

(each direction)	$\pm 15^\circ$
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Hydraulic system:

One 64 mm (2.5") bore, double-acting cylinder powered by a gear-type pump.

Frame

Fabricated from structural steel plate and joined at the articulation pivot. The articulation area is structurally reinforced and joined by hardened steel pins. Two vertical pins provide a steering angle of $\pm 38^\circ$ and a horizontal pin allows frame oscillation of $\pm 15^\circ$. The articulation lock prevents machine articulation when placed in the locked position. Frame also includes tie-down points for transport.

Electrical

The 24-volt electrical system consists of two maintenance-free Caterpillar batteries, color-coded and numbered wiring wrapped in nylon braid. The starting system provides 750 cold cranking amps (cca). The system includes a 55-amp alternator.

Service Refill Capacities

	Liters	Gallons
Fuel tank	144	38
Cooling system	18	4.8
Engine oil w/filter	6.8	1.8
Vibratory bearing lube		
CS-323C	50.8	13.4
CP-323C	25.4	6.7
Axle & final drives	9.5	2.5
Hydraulic tank	49.2	13
Filtration system (pressure type)		

Brakes

Service brake features

- Closed-loop hydrostatic drive system provides dynamic braking during operation.

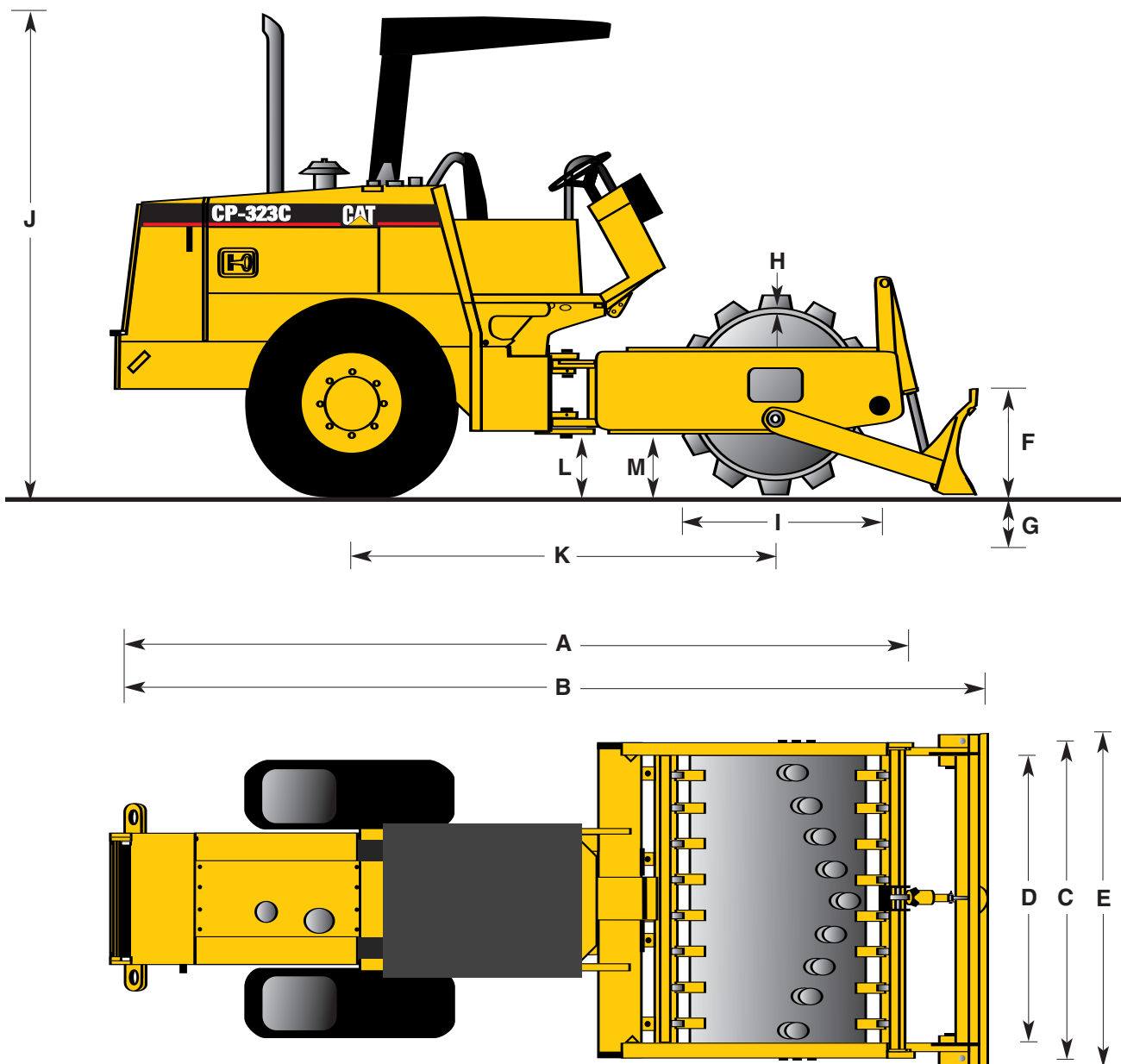
Secondary brake features*

- Spring-applied/hydraulically-released multiple disc type brake mounted on the drum drive gear reducer. Secondary brakes are activated by a button on the operator's console, loss of hydraulic pressure in the brake circuit or when the engine is shut down. A brake interlock system prevents driving through the secondary brake.

**Braking system meets SAE J1472.*

Dimensions

	CS-323C		CP-323C	
A Overall length	4.12 m	(13' 6")	4.12 m	(13' 6")
B Length with blade	4.5 m	(14' 9")	4.5 m	(14' 9")
C Overall width	1.39 m	(4' 6")	1.39 m	(4' 6")
D Drum width	1270 mm	(50")	1270 mm	(50")
E Width with blade	1.57 m	(5' 2")	1.57 m	(5' 2")
F Blade height	558 mm	(22")	558 mm	(22")
G Blade cutting depth	76 mm	(3")	76 mm	(3")
H Drum shell thickness	20 mm	(0.78")	20 mm	(0.78")
I Drum diameter	1016 mm	(40")	840 mm	(35")
Drum diameter over pads	—	—	1016 mm	(40")
J Height at ROPS/FOPS canopy	2.51 m	(8' 2")	2.51 m	(8' 2")
K Wheelbase	2.24 m	(7' 4")	2.24 m	(7' 4")
L Ground clearance	347 mm	(13.6")	347 mm	(13.6")
M Curb clearance	335 mm	(13.2")	335 mm	(13.2")
Inside turning radius	2.62 m	(8' 7")	2.62 m	(8' 7")
Outside turning radius	3.89 m	(12' 9")	3.89 m	(12' 9")



Optional Equipment

Leveling Blade bolts onto the drum yoke and is available for both the CS-323C and CP-323C. The complete assembly includes blade, push arms, reversible/replaceable cutting edges, replaceable skid plates, center-mounted hydraulic lift cylinder, control valve and flow divider. The moldboard is constructed of heat-treated structural sections. Blade raise and lower is controlled by a lever to the right of the propel lever.

Flow Divider is standard on the CP-323C and CS-323C machines ordered with a leveling blade. The CS-323C ordered without a blade, can be ordered with this option to provide increased tractive effort in climbing grades or working in thick lifts of soft material.

Working Light Package includes two front-facing and two rear-facing working lights for working under dim or low light conditions. This system is intended for use under working conditions and not for highway transport purposes.

Engine Compartment Enclosures features lockable swing open side engine covers to protect the engine from vandals and harsh environmental conditions.

Spark Arrester Muffler meets the specifications for those applications that require a spark arresting muffler.

Vinyl Suspension Seat is fully adjustable to include fore and aft positions, bottom cushion height and suspension stiffness and flip-up armrests.

Drum Guard System helps protect the drum hydraulic components. Especially useful when working in trenches.

Flexible Urethane Scrapers for the CS-323C mounted at the front and rear of the drum are made of polyurethane and are designed to contact the drum and completely clean debris from the drum surface.

Rear Scraper Teeth for the CP-323C mounted at the rear of the drum and work in conjunction with the standard front scraper teeth.

8-Ply Tires with traction tread are available for the CS-323C.

Total Customer Support System

Service capability — most dedicated dealer support system to ensure fast service whether at the dealer's shop or in the field by trained technicians using the latest tools and technology.

Parts availability — most parts on dealer's shelf when you need them. Computer-controlled, emergency search system backup.

Parts stock lists — dealer helps you plan on-site parts stock to minimize your parts investment while maximizing machine availability.

Literature support — easy-to-use parts books, operation and maintenance manuals and service manuals to help you get maximum value from your Caterpillar equipment.

Remanufactured parts — pumps and motors, pod-style weight housings, engines, fuel system and charging system components available from dealer at a fraction of new part cost.

Machine management services — effective preventive maintenance programs, cost-effective repair options, customer meetings, operator and mechanic training.

Flexible financing — your dealer can arrange attractive financing on the entire line of Caterpillar equipment. Terms structured to meet cash flow requirements. See how easy it is to own, lease or rent Cat equipment.

Caterpillar offers a comprehensive line of vibratory soil compactors.

Contact your local Caterpillar dealer to learn more about the complete line of Caterpillar Paving Products.



The 600E-Series Soil Compactors

Operating Weight (with ROPS/FOPS)

CS-663E	16 700 kg	36,820 lb
CP-663E	16 500 kg	36,375 lb
CS-683E	18 500 kg	40,785 lb
Drum Width	2.13 m	7'
Gross Power	129 kW	173 hp



The 500E-Series Soil Compactors

Operating Weight (with ROPS/FOPS)

CS-533E	10 485 kg	23,120 lb
CP-533E	11 320 kg	24,960 lb
CS-563E	11 120 kg	24,520 lb
CP-563E	11 555 kg	25,479 lb
CS-573E	13 570 kg	29,922 lb
CP-573E	13 750 kg	30,319 lb
CS-583E	15 100 kg	33,296 lb
CP-583E	15 235 kg	33,593 lb
Drum Width	2.13 m	7'
Gross Power (CS/CP-533E only)	97 kW	130 hp
Gross Power	112 kW	150 hp



The 400E-Series Soil Compactors

Operating weight (with ROPS/FOPS)

CS-423E	6745 kg	14,875 lb
CS-433E	6745 kg	14,875 lb
CP-433E	7145 kg	15,750 lb
Drum Width	1.67 m	5' 6"
Gross Power		
CS-423E	62 kW	83 hp
CS/CP-433E	75 kW	100 hp

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Featured machines in photography may include optional equipment.
Materials and specifications are subject to change without notice.

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