

CS-323C CP-323C

Vibratory Soil
Compactors



Cat® 3054 DINA Diesel Engine

Gross Power	52 kW	70 hp
Compaction Width	1270 mm	50"
Centrifugal Force	66,8 kN	15,000 lb
Vibratory Frequency	35 Hz	2,100 vpm

Operating Weight

CS-323C	4540 kg	9,985 lb
CP-323C	4745 kg	10,440 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.

Engine

Caterpillar 3054 DINA Diesel Engine delivers 52 kW (70 hp) and is built for performance and reliability without sacrificing fuel economy.

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Vibratory System

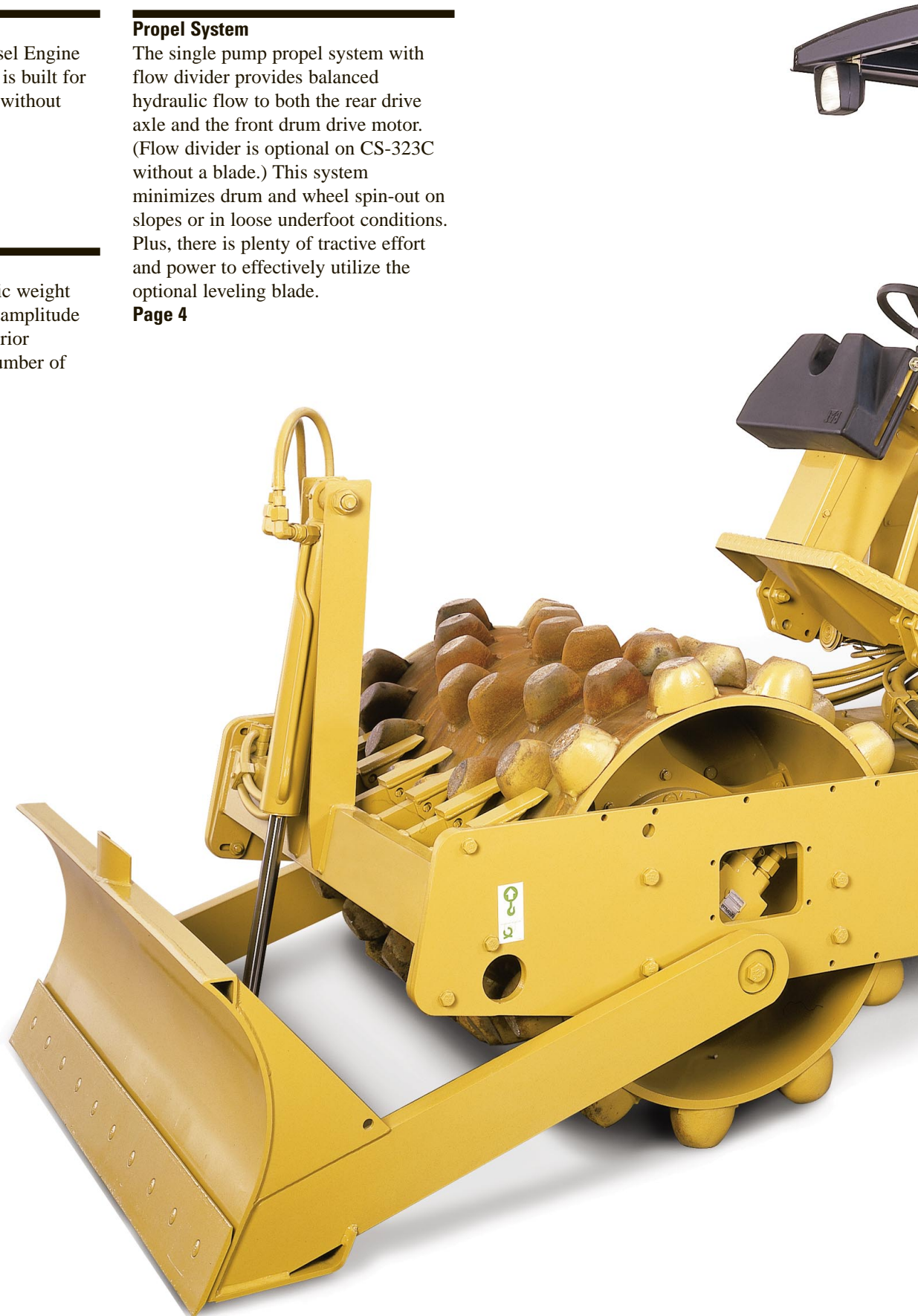
An industry-proven eccentric weight design combined with high amplitude and frequency delivers superior compaction in the fewest number of passes.

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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. (Flow divider is optional on CS-323C without a blade.) This system minimizes drum and wheel spin-out on slopes or in loose underfoot conditions. Plus, there is plenty of tractive effort and power to effectively utilize the optional leveling blade.

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Serviceability

An open sided engine and a swing down rear grill permit easy service access. Wide opening and lockable side engine doors are optional. The operator's station tilts forward to provide access to the hydraulic pumps.

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Operator's Station

C-Series Soil Compactors feature exceptional operator comfort and visibility. All controls and gauges are positioned to maximize operator productivity and convenience. Four heavy-duty isolation mounts minimize machine vibration transfer to the operator's station.

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Leveling Blade

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

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Performance and Reliability You Can Trust

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

Caterpillar® 3054 Direct Injection, Naturally Aspirated (DINA) Diesel Engine

Industry-proven Caterpillar technology designed to provide performance, reliability and fuel economy in demanding construction applications.



Precise balance and optimum running speed for smooth operation, good fuel economy and long engine life.

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

Good displacement-to-power ratio ensures long life and exceptional reliability.

High torque rise for consistent power under increased loads.

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

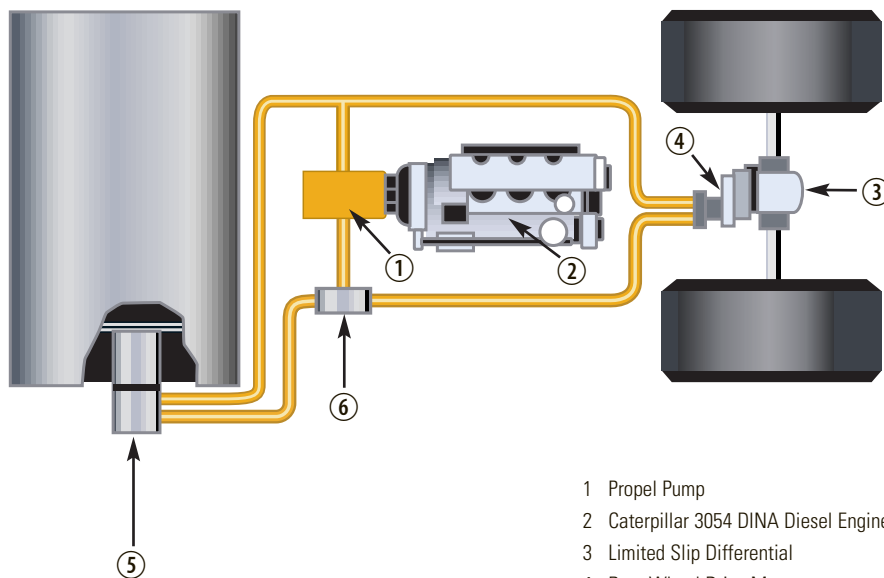
Dual fuel filters and water separator offer superior protection for the unit injection system.

Air inlet heater helps cold weather starting.

Meets U.S. EPA emissions standards.

Efficient Propel System

Superior tractive effort and gradeability for outstanding productivity and utilization.



- 1 Propel Pump
- 2 Caterpillar 3054 DINA Diesel Engine
- 3 Limited Slip Differential
- 4 Rear Wheel Drive Motor
- 5 Drum Drive Motor
- 6 Flow Divider

Single propel pump with flow divider provides separate, balanced flow to the rear wheel drive motor and the drum drive motor. Increases tractive effort in soft material and on slopes. (Flow divider is optional on CS-323C without a blade.)

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

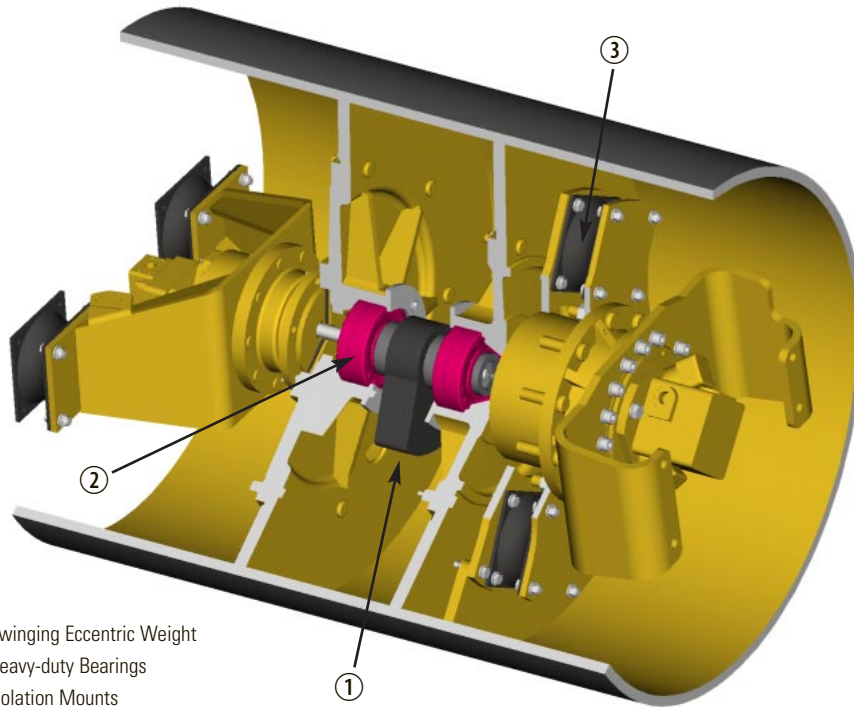
Infinitely variable speed range for maximum torque when blading or grade climbing, plus the ability to move quickly over longer distances.

Flushing valves in each propel circuit helps keep hydraulic oil cool and clean.

High travel speed up to 8,9 km/hr (5.5 mph).

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 provide superior compactive effort and exceptional productivity.

Vibratory frequency of 35 Hz (2,100 rpm) combined with optimal drum weight, enables the operator to achieve density in fewer passes.

Heavy-duty bearings for the weight shaft allows higher frequency for greater force and greater reliability.

1 year/1,000 hour vibratory bearing lube service interval for reduced maintenance.

Rubber isolation mounts allow more force to be transmitted to the ground and less vibration to the operator.

Operator's Station

Designed for simple control, comfort and productivity.



Single lever control for propel and vibratory On/Off provides simple, one-handed 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.

Exceptional visibility to the drum, tires 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 four heavy-duty rubber mounts reduce machine vibration transmitted to the operator.

Compact Size for Specific Applications

Features and benefits designed specifically for trench work and limited space job sites.



Narrow machine width of 1393 mm (54.8") is ideal for working in trench applications or limited space job sites.

Propel system with flow divider provides effective hydraulic pressure to both the wheel and drum drive motors even if one loses traction and begins to spin.

Short turning radius for good maneuverability in confined work areas.

Padded drum features a tapered pad design, chevron pattern and individually adjustable scraper teeth for maximum compactive effort transmitted to the material.

Optional leveling blade expands machine versatility and utilization.

Optional Leveling Blade

Increased versatility and machine utilization with plenty of power for blading applications.



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

Exceptional tractive effort for effective blade utilization in backfilling, material spreading, light dozing and trench applications.

Good grade approach angle of 30° with the blade in the raised position.

Efficient propel system combined with correct engine horsepower provides plenty of power to effectively use the blade in tough material and on grades.

Reliability and Serviceability

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



Convenient ground level access to all daily maintenance checks and fuel fill.

Visual indicators for the hydraulic oil tank and filter, and the air restriction indicator.

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

1 year/1,000 hour vibratory bearing lube service interval for reduced maintenance.

Quick-connect hydraulic test ports simplify system diagnostics.

Electrical wiring is color-coded and numbered to simplify troubleshooting.

Nylon braided wrap and all-weather connectors ensure electrical system integrity.

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



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

Scheduled Oil Sampling (S•O•S) ports allow for simple fluid collection.

Factory Reman parts are a cost-effective and reliable solution to keep your machines productive. Caterpillar offers a large choice of Reman components.

Engine

Four-stroke cycle, four cylinder Caterpillar® 3054 Direct Injection Naturally Aspirated (DINA) Diesel Engine. Meets EPA and CARB emissions engine regulations.

Ratings at	RPM	kW	hp
Gross power	2200	52	70

Ratings of Caterpillar machine engines are based on standard air conditions of 25°C (77°F) and 99 kPa (29.32" Hg) dry barometer. Power is based on using 35° API gravity fuel having an LHV of 42,780 kJ/kg (18,390 Btu/lb) when 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. No derating required up to 2134 m (7,000') altitude.

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

Net Power	kW	hp
EEC80/1269	49	66
ISO 9249	49	66
SAE J1349 JUNE95	49	66

Dimensions

Bore	100 mm	3.93"
Stroke	127 mm	5"
Displacement	4 L	243 cu. in.

Dual-element, dry-type air cleaner with visual restriction indicator.

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 CS-323C 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 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.

Top Speed (forward and reverse):

8,9 km/hr (5.5 mph)

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 45-amp alternator.

Service Refill Capacities

	Liters	U.S. Gallons
Fuel tank	144	38
Cooling system	22,7	6
Crankcase	7,6	2
Vibratory bearing lube		
CS-323C	50,8	13.4
CP-323C	25,4	6.7
Differential and Final drives (planetaries)		
	9,5	2.5
Hydraulic system	49,2	13
Filtration system (pressure type)		
Propel	15 micron absolute	
Vibratory	20 micron absolute	

Steering

A priority-demand hydraulic power-assist steering system provides smooth low-effort steering. The system always receives the power it needs regardless of other hydraulic functions.

Minimum turning radius: CS-323C and CP-323C

Inside	2625 mm	(8' 7")
Outside	3895 mm	(12' 9")

Steering angle:

(each direction) ± 38°

Oscillation angle:

(each direction) ± 15°

Hydraulic system:

Two 63.5 mm (2.5") bore, double-acting cylinders powered by a gear-type pump.

Instrumentation

Alternator Light, Hour Meter, Fuel Gauge, Horn, Audible Warning Horn for the: Engine Oil Pressure Light, Engine Water Temperature Light, Hydraulic Oil Temperature Light, Low Charge Pressure Light.

Operator and Machine Protective Equipment

Roll Over Protection Structure / Falling Object Protective Structure (ROPS/FOPS) – A two-post type that bolts onto flanges integral with the operator platform. The structure meets SAE recommended practice J1040 May94 for Roll Over Protection Structure.

Backup Alarm – 112 dB(A) alarm sounds whenever the machine is in reverse. The backup alarm has three sound levels that can be changed with a switch located on the alarm.

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

Vibratory System

Drum diameter (over drum)		
CS-323C	1016 mm	40"
CP-323C	840 mm	35"
Drum diameter (over pads) CP-323C		
	1016 mm	40"
Drum width		
	1270 mm	50"
Drum shell thickness		
	20 mm	.78"
Pads (CP-323C only)		
Number of pads		
		88
Pad height		
	88 mm	3.5"
Pad face area		
	79,3 mm sq	12.3 in sq
Number of chevrons		
		11
Eccentric weight drive		Hydrostatic drive
Frequency		
	35 Hz	2,100 vpm
Nominal Amplitude		
CS-323C	1,30 mm	.05"
CP-323C	1,30 mm	.05"
Centrifugal force @ 35 Hz (2,100 vpm)		
	66,8 kN	15,000 lb
Weight at Drum		
CS-323C	2040 kg	4,490 lb
CP-323C	2250 kg	4,945 lb

	Static		Centrifugal	
PLI (CS-323C)	16 kg/cm	90 lb/in	54 kg/cm	300 lb/in
PSI (CP-323C)	11,3 kg/cm ²	160 lb/in ²	34,5 kg/cm ²	490 lb/in ²

Weight (approximate)

Operating weight includes lubricants, coolant, 79 kg (175 lb) operator, ROPS structure, full fuel tank and full hydraulic system.

	CS-323C		CP-323C	
Operating (Standard)	4540 kg	9,985 lb	4745 kg	10,440 lb
Operating (Opt. Blade)	4850 kg	10,665 lb	5055 kg	11,120 lb
Shipping (Standard)	4395 kg	9,670 lb	4600 kg	10,125 lb
Shipping (Opt. Blade)	4705 kg	10,350 lb	4910 kg	10,850 lb
Weight at drum (Standard)	2040 kg	4,490 lb	2250 kg	4,945 lb
Weight at drum (Opt. Blade)	2350 kg	5,170 lb	2560 kg	5,625 lb

Final Drives and Tires

Heavy-duty final drive is hydrostatic with gear reducer to the drum and hydrostatic with differential and planetary gear reduction in each wheel.

Tires:

284 mm (11.2") x 610 mm (24")
6-ply traction

Axle

Heavy-duty fixed rear axle with gear reducer and limited slip differential.

Axle width 1270 mm 50"

Brakes

Service brake features

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

Secondary brake features

Spring-applied/hydraulically-released multiple disc-type mounted on a drum drive reducer.

Secondary brake is part of the drum drive gearbox. It is activated by: 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 helps prevent driving through the secondary brake.

**Braking system meets SAE J1472 JAN99*

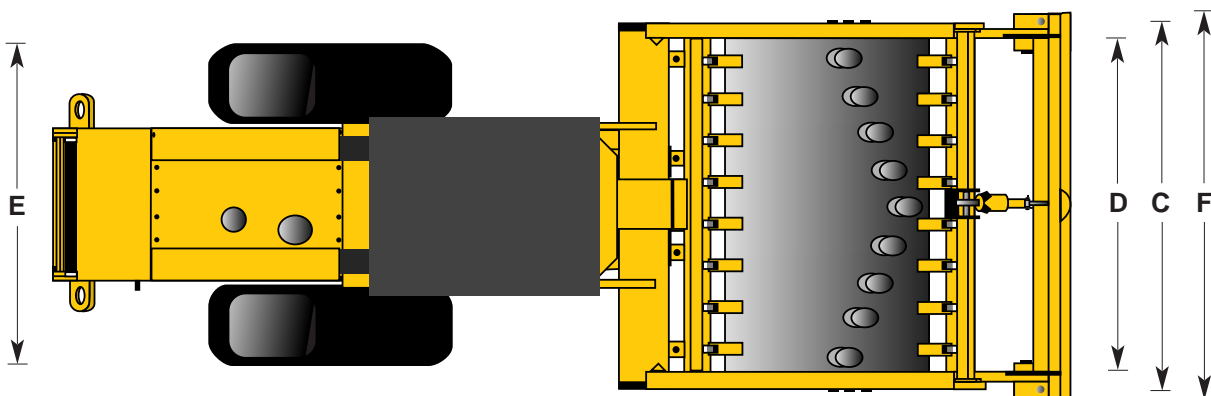
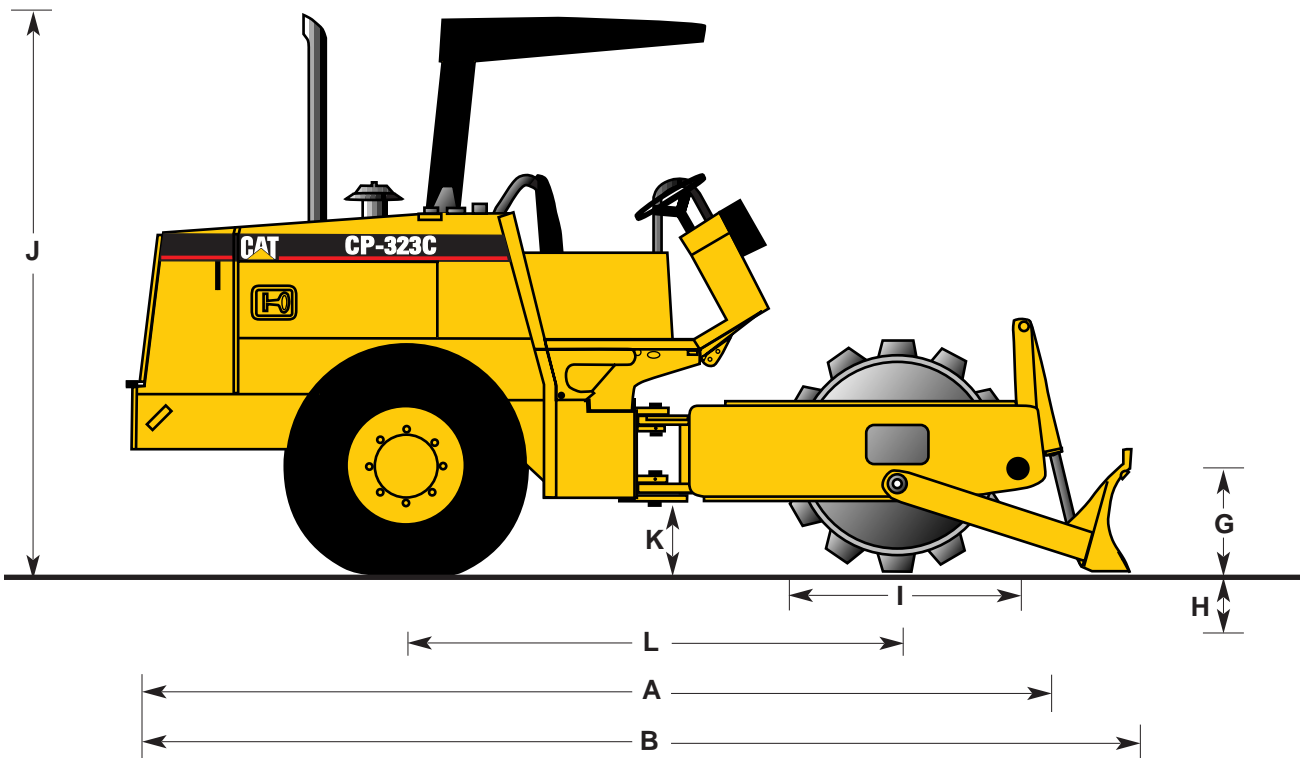
Frame and Drum Yoke

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 $\pm 15^\circ$.

Dimensions

All dimensions are approximate.

	CS-323C	CP-323C
A Operating length	4095 mm (13' 5")	4095 mm (13' 5")
B Length with blade	4469 mm (14' 7")	4469 mm (14' 7")
C Yoke width	1393 mm (4' 6")	1393 mm (4' 6")
D Drum width	1270 mm (50")	1270 mm (50")
E Width at tires	1270 mm (50")	1270 mm (50")
F Blade width	1575 mm (62")	1575 mm (62")
G Blade height	558 mm (22")	558 mm (22")
H Blade cutting depth	78 mm (3")	78 mm (3")
I Drum diameter	1016 mm (40")	840 mm (35")
Drum diameter over pads	—	1016 mm (40")
J Height at ROPS	2514 mm (8' 2")	2514 mm (8' 2")
K Ground clearance	347 mm (13")	347 mm (13")
L Wheelbase	2240 mm (7' 4")	2240 mm (7' 4")
Inside turning radius	2625 mm (8' 7")	2625 mm (8' 7")
Outside turning radius	3895 mm (12' 9")	3895 mm (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. The blade measures 1575 mm (62") wide and 558 mm (22") high. Maximum depth of cut is 78 mm (3").

Working Light Package that is designed to illuminate the work area under dim or low light conditions. Four variable adjustment, flood-type lights are positioned two forward and two rear. This system is intended for use under working conditions and not for highway transport purposes.

Engine Compartment Enclosures features lockable engine covers to reduce operating noise and protect the engine from vandals and harsh environmental conditions.

Spark Arrester Muffler meets the specifications for those applications that require it.

Suspension Seat is fully adjustable for operator comfort on rough terrain.

Padded Drum Conversion Kit is interchangeable with the CS-323C smooth drum and includes all internal components plus external drum cleaner teeth. Conversion time is about six hours. Padded drum dimensions and performance specifications are the same as the CP-323C.

Smooth Drum Conversion Kit is interchangeable with the CP-323C padded drum and includes all internal components plus external drum scraper. Conversion time is about six hours. Smooth drum dimensions and performance specifications are the same as the CS-323C.

Vibratory Tachometer displays the actual vibratory system frequency on the console in front of the operator.

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

Urethane Scrapers for the front and rear on the CS-323C replace the standard steel scraper. They contact the drum continuously and do a better job of drum cleaning when working on cohesive material.

Rear Scraper Teeth are available for the CP-323C. The optional scraper teeth work in conjunction with the standard front scraper and uses the same steel tips as the front scraper.

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

Spanish or Portuguese Warning Labels aid in safe machine operation when operating in a primarily Spanish or Portuguese-speaking area.

Total Customer Support System

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.

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

Remanufactured parts — vibratory pods, pumps and motors, engines, fuel system and charging system components available from dealer at 20-50% of new part cost.

Service capability — dealer's shop or fast field service by trained technicians using latest tools and technology.

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

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.

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