



Cat[®] CS7

Smooth Drum Vibratory Soil Compactor

The Cat[®] CS7 smooth drum vibratory soil compactor continues a legacy of built-in quality, reliability, and durability. The dependable propel system, comfortable operator station and automated features help increase productivity. This 7-metric ton roller is ideally suited for granular soil applications or cohesive soil applications when equipped with an optional padfoot shell kit.

Efficient Power

- The dual pump propel system with built-in traction control is designed to provide dedicated flow to the drum drive motor and to the rear axle motors for excellent traction and gradeability in forward and reverse.
- Powered by a Cat[®] C4.4 engine that meets Brazil MAR-1 and UN ECE R96 Stage IIIA emission standards, equivalent to U.S. EPA Tier 3 and EU Stage IIIA.
- Eco-mode limits engine RPM helping to reduce fuel consumption.
- Boost versatility with an optional leveling blade for backfilling, knockdown and light dozing.

Designed for Compaction Performance

- High static linear loads and amplitudes.
- The exclusive eccentric weight vibratory system with its 3-year, 3000-hour maintenance interval is designed for high reliability, smooth performance and low noise levels.
- Auto-vibe helps operators easily maintain consistent, high-quality compaction.
- The Variable Frequency option provides a wide range of frequencies to help maximize compaction performance.
- Expand machine versatility with the addition of an oval or square padfoot shell kit, allowing your smooth drum roller to compact semi-cohesive and cohesive materials.
- An optional MicroVibe™ drum configuration provides a lower range of amplitude than the standard drum for vibration-sensitive applications.
- Compaction Meter Value (CMV) is an optional, accelerometer-based measurement for granular soils, measuring only when the vibratory system is active. Cat Compaction technologies help operators determine when target values are met, reducing unnecessary passes and rework.

Comfortable Work Environment

- The ISO-mounted operator station and rubber floormats help reduce noise and vibration for comfort during operation.
- Operators have a clear view to the working area in front and behind the machine.
- The ergonomic operator station includes an adjustable seat with the control console and multifunction LCD display integrated into the right-side arm rest.
- Easy-to-use controls are grouped by function and a large display informs operators of machine performance.
- Operators are protected from the elements by a standard equipped ROPS/FOPS canopy or an optional climate-controlled ROPS/FOPS cab with hinged glass windows.
- Low sound and vibration levels enhance comfort and productivity.



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Safety Features

- Safety and visibility are enhanced with a standard rear vision camera viewed on a large color touchscreen display.
 - An unobstructed view of the drum from the driver's seat allows the operator to see the compaction area ahead of them, monitor overlap and observe scraper performance.
 - The Cat® Detect Seat Belt Reminder System helps improve operator safety by monitoring seat belt use and alerting when improper behavior is detected. This technology promotes consistent seat belt habits, helping protect operators and support a safer work environment.
 - Seat Belt Alert – If an operator attempts to operate the machine without fastening their seat belt, such as disengaging the parking brake or initiating machine movement, audible and visual alerts activate to prompt proper seat belt use.
 - Seat Belt Inhibit – Seat Belt Inhibit can prevent the machine from traveling if the seat belt is not fastened correctly, helping to intervene before unsafe operation occurs.
- VisionLink™ subscription and compatible Product Link™ hardware required.*
- Large steps, handrails, and an antiskid surface help provide stability during entry and exit of the operator station.
 - Internal and external mirrors provide the operator with a broad view of the jobsite.

Low Operating Cost

- The articulated hitch with sealed-for-life bearings does not require routine maintenance.
- Safely access the engine compartment and cooling module from ground level for easy service and fluid sampling.
- Monitor fluid conditions with regular sampling to help extend change intervals up to 500 hours engine oil, 3000 hours eccentric housing and hydraulic oil, and 12000 hours coolant.
- Extended maintenance intervals not only reduce downtime but decrease the amount of fluid and filters that are replaced over the life of the machine.
- VisionLink takes the guesswork out of managing your entire fleet—regardless of size or equipment manufacturer*—by providing maintenance needs, machine hours, location, fuel usage, idle time, diagnostic codes, and more through interactive dashboards on your mobile device or desktop, helping you make informed decisions that lower costs, simplify maintenance, and improve safety and security on your jobsite.

**Data field availability can vary by equipment manufacturer and is provided through an application programming interface (API).*

APPLICATIONS

- Parking lots
- Residential projects
- Building construction
- Pipelaying / trenches
- Golf courses
- Parks
- Production of <100 m³ (130 yd³)

CS7



**CP7,
CS7 (with Padfoot Shell Kit)**



Assumes density specification is 95% of Standard Proctor and can vary substantially due to different soil conditions.

SAND / GRAVEL

30 cm (12 in)

Smooth drum, high amplitude moving to low amplitude when approaching compaction, 4-6 passes.

CLAY / SILT

13 cm (5 in)

Padfoot and smooth drum application (for sealing), 4-10 passes. Compaction in cohesive soils strongly depends on moisture content.

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Standard and Optional Equipment

Standard and optional equipment may vary. Consult your Cat dealer for details.

	Standard	Optional		Standard	Optional
OPERATOR ENVIRONMENT			POWERTRAIN		
ROPS/FOPS Canopy, Handrails, Floor Mat	✓		Cat® C4.4 Engine	✓	
ROPS/FOPS Cab with Climate Control, Exterior Rear View Mirrors		✓	Air Cleaner, Dual Element	✓	
Adjustable Vinyl Non-suspension Seat with Integrated Console (Canopy)	✓		Two-Speed Throttle Switch including Eco-mode	✓	
Adjustable Vinyl Suspension Seat with Integrated Console (Canopy)		✓	Dual Propel Pumps; One for Drum Drive, One for Rear Axle	✓	
Adjustable Deluxe Cloth High-back Air-ride Seat with Integrated Console (Cab)		✓	Fuel Filter, Water Separator, Priming Pump, Water Indicator	✓	
Sun Visor (Cab)		✓	Tilting Radiator / Hydraulic Oil Cooler	✓	
Roll-Down Sun Screen (Cab)		✓	Dual Braking System	✓	
LCD Display with Lockable Vandalism Guard	✓		Two-Speed Hydrostatic Transmission	✓	
Adjustable Tilting Steering Column with Integrated Cup Holders	✓		Transmission Guard		✓
High Visibility 76 mm (3 in) Seat Belt	✓		ELECTRICAL		
12-Volt Power Outlet	✓		12-Volt Electrical System	✓	
Horn, Backup Alarm	✓		150-Amp Alternator	✓	
VIBRATORY SYSTEM			1000 Cold-cranking Amps Battery Capacity	✓	
Smooth Drum	✓		TECHNOLOGY		
Removable Shell Kit – Oval or Square Pads		✓	VisionLink™	✓	
Pod-Style Eccentric Weight Housings	✓		Compaction Meter Value (CMV)		✓
Dual Amplitude, Single Frequency	✓		SAFETY		
Variable Frequency		✓	Rear Vision Camera System with Color Touchscreen Display	✓	
Auto-vibe Function	✓		Seat Belt Reminder		
MicroVibe™		✓	Seat Belt Alert	✓	
Single Adjustable Steel Scraper	✓		Seat Belt Inhibit	✓	
Dual Adjustable Steel Scrapers		✓	OTHER		
Dual Adjustable Polyurethane Scrapers		✓	Lockable Engine Enclosure, Hydraulic and Fuel Tanks	✓	
Leveling Blade		✓	Sight Gauges for Hydraulic Oil Level and Radiator Coolant Level	✓	
			Scheduled Oil Sampling (S•O•S SM) Ports: Engine Oil, Hydraulic Oil, and Coolant	✓	
			Factory Filled Bio-Hydraulic Oil		✓
			LED Working Lights (4)	✓	
			LED Working Lights (8)		✓
			Amber Rotating Beacon		✓

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Technical Specifications

Engine and Powertrain

Engine Model	Cat C4.4	
Meets Brazil MAR-1 and UN ECE R96 Stage IIIA, equivalent to U.S. EPA Tier 3 and EU Stage IIIA.		
Engine Power @ 2,200 rpm ISO 14396	74.5 kW	99.9 hp
Gross Power @ 2,200 rpm SAE J1995	75.3 kW	101 hp
Net Power @ 2,200 rpm ISO 9249	69 kW	92.5 hp
Net Power @ 2,200 rpm SAE J1349	69 kW	92.5 hp
Number of Cylinders	4	
Displacement	4.4 L	269 in ³
Stroke	127 mm	5 in
Bore	105 mm	4.1 in
Build Number	03B	
Maximum Travel Speed (Forward or Reverse)	11.4 km/h	7.1 mph
Theoretical Gradeability, no vibration	57%	
• Advertised power is tested per the specified standard in effect at the time of manufacture. • Net power advertised is the power available at the engine flywheel when equipped with a direct drive fan, air cleaner, and alternator. • Actual gradeability may vary based on site conditions and machine configuration. Refer to the Operation and Maintenance Manual for more information.		

Vibratory System

Frequency		
Standard	31.9 Hz	1,915 vpm
During Eco-mode Operation	29 Hz	1,741 vpm
Optional Variable Frequency	23.3-31.9 Hz	1,400-1,915 vpm
Nominal Amplitude @ 31.9 Hz (1915 vpm)		
High	1.68 mm	0.066 in
Low	0.85 mm	0.033 in
Centrifugal Force @ 31.9 Hz (1915 vpm)		
Maximum	133.4 kN	29,991 lbF
Minimum	67 kN	15,057 lbF
VM Class at High Amplitude (Cab Configuration)		VM2
Micro-Vibe Nominal Amplitude @ 31.9 Hz (1915 vpm)		
High	1.05 mm	0.041 in
Low	0.18 mm	0.007 in
Micro-Vibe Centrifugal Force @ 31.9 Hz (1915 vpm)		
Maximum	82.8 kN	18,610 lbF
Minimum	14.5 kN	3,258 lbF
Micro-Vibe VM Class at High Amplitude (Cab Configuration)		VM1
Static Linear Load		
ROPS/FOPS Canopy	20.2 kg/cm	113.1 lbs/in
ROPS/FOPS Cab	20.7 kg/cm	115.9 lbs/in

Weights

	Operating Weight		Weight at Drum	
ROPS/FOPS Canopy	6885 kg	15,179 lb	3385 kg	7,463 lb
Leveling Blade	7300 kg	16,094 lb	3935 kg	8,675 lb
Oval Padfoot Shell Kit	7965 kg	17,560 lb	4440 kg	9,789 lb
Oval Padfoot Shell Kit and Leveling Blade	8380 kg	18,475 lb	4990 kg	11,001 lb
Square Padfoot Shell Kit	7945 kg	17,516 lb	4420 kg	9,744 lb
Square Padfoot Shell Kit and Leveling Blade	8360 kg	18,431 lb	4970 kg	10,957 lb
ROPS/FOPS Cab	7185 kg	15,840 lb	3475 kg	7,661 lb
Leveling Blade	7600 kg	16,755 lb	4025 kg	8,874 lb
Oval Padfoot Shell Kit	8260 kg	18,210 lb	4530 kg	9,987 lb
Oval Padfoot Shell Kit and Leveling Blade	8675 kg	19,125 lb	5080 kg	11,199 lb
Square Padfoot Shell Kit	8240 kg	18,166 lb	4510 kg	9,943 lb
Square Padfoot Shell Kit and Leveling Blade	8655 kg	19,081 lb	5060 kg	11,155 lb

Operating weights are approximate and consider full fluids, standard vibratory system and 75 kg (165 lb) operator. Cab weights include heat and air conditioning. Smooth drum configurations with flotation tires, and padfoot shell kit configurations with lug tread tires. Shell kit weights listed include installed shell kit and scrapers.

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Technical Specifications

Dimensions

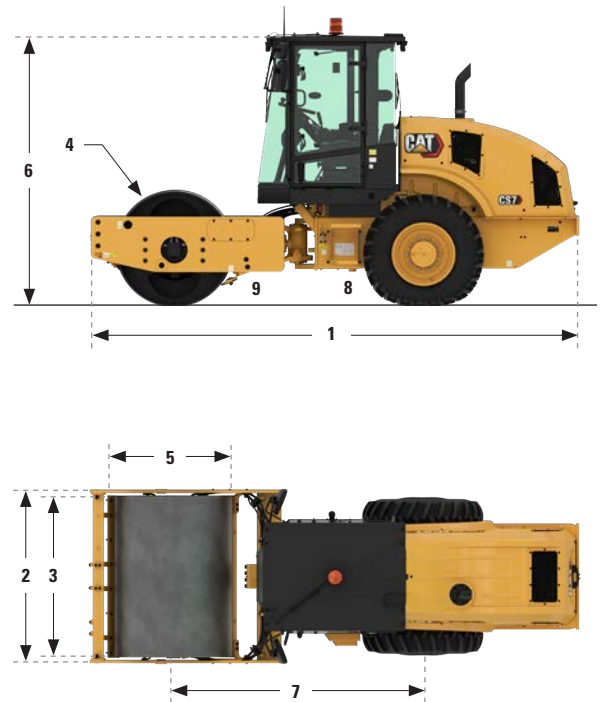
1	Overall Length	5091 mm	16.7 ft
	with optional Leveling Blade	5609 mm	18.4 ft
2	Overall Width	1800 mm	70.9 in
	with optional Leveling Blade	2121 mm	83.5 in
3	Drum Width	1676 mm	66 in
4	Drum Shell Thickness	25 mm	1 in
5	Drum Diameter	1221 mm	48.1 in
6	Overall Height		
	Canopy	2810 mm	9.2 ft
	Cab	2852 mm	9.4 ft
7	Wheelbase	2601 mm	8.5 ft
8	Ground Clearance	391 mm	15.4 in
9	Curb Clearance	369 mm	14.5 in
	Optional Leveling Blade Height	582 mm	22.9 in
	Inside Turning Radius	3.05 m	10 ft
	Hitch Articulation Angle	37°	
	Hitch Oscillation Angle	15°	

Optional Padfoot Shell Kits

Number of Pads	98		
Number of Chevrons	14		
Oval Pads			
Pad Height	88.9 mm	3.5 in	
Pad Face Area	63.6 cm ²	9.9 in ²	
Square Pads			
Pad Height	81.3 mm	3.2 in	
Pad Face Area	95.5 cm ²	14.8 in ²	

Service Refill Capacities

Fuel Tank	140 L	37 gal
Cooling System	18.4 L	4.9 gal
Heating System	2 L	0.5 gal
Engine Oil with Filter	9.5 L	2.5 gal
Eccentric Weight Housings (combined)	13 L	3.4 gal
Axle and Final Drives	14.6 L	3.9 gal
Hydraulic Tank	26 L	6.9 gal
Drum Drive Gearbox	2.3 L	0.6 gal



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Environmental Declaration

The following information applies to the machine at the time of final manufacture as configured for sale in the regions covered in this document. The content of this declaration is valid as of the date issued; however, content related to machine features and specifications are subject to change without notice. For additional information, please see the machine's Operation and Maintenance Manual.

For more information on sustainability in action and our progress, please visit www.caterpillar.com/en/company/sustainability.html.

ENGINE

- The Cat C4.4 is available in configurations that meet Brazil MAR-1 and UN ECE R96 Stage IIIA, equivalent to U.S. EPA Tier 3 and EU Stage IIIA emission standards.
- Cat engines are compatible with diesel fuel blended with the following lower-carbon intensity fuels* up to:
 - ✓ 20% biodiesel FAME (fatty acid methyl ester)
 - ✓ 100% renewable diesel, HVO (hydrotreated vegetable oil) and GTL (gas-to-liquid) fuels

Refer to guidelines for successful application. Please consult your Cat dealer or "Caterpillar Machine Fluids Recommendations" (SEBU6250) for details.

** Tailpipe greenhouse gas emissions from lower-carbon intensity fuels are essentially the same as traditional fuels.*

AIR CONDITIONING SYSTEM

- The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 0.9 kg (1.98 lb) of refrigerant, which has a CO₂ equivalent of 1.287 metric tonnes (1.419 tons).

PAINT

- Based on best available knowledge, the maximum allowable concentration, measured in parts per million (PPM), of the following heavy metals in paint are:
 - Barium < 100 ppm
 - Cadmium < 1 ppm
 - Chromium < 5 ppm
 - Lead < 5 ppm

SOUND PERFORMANCE

ISO 6395:2008 (external) – 107 dB(A)

ISO 6396:2008 (internal) – 79 dB(A)

ISO 6396:2008 (non-cab) – 92 dB(A)

- External Sound – The spectator sound power level is measured according to the test procedures and conditions specified in ISO 6395:2008 for a Caterpillar machine that is properly equipped and maintained. The measurements were conducted at 100% of the maximum engine cooling fan speed.
- Internal Sound – The operator's sound pressure level is measured according to the test procedures and conditions specified in ISO 6396:2008 for a cab offered by Caterpillar, when properly installed and maintained and tested with the door and windows closed. The measurements were conducted at 100% of the maximum engine cooling fan speed.
- Non-cab Sound – The operator sound pressure level is measured according to the test procedures and conditions specified in ISO 6396:2008 for an open operator station offered by Caterpillar. The measurements were conducted at 100% of the maximum engine cooling fan speed.
- Hearing protection may be needed when operating with an open operator station and cab (when not properly maintained for doors/windows open) for extended periods or in noisy environment(s).

OILS AND FLUIDS

- Caterpillar factory fills with ethylene glycol coolants. Cat Diesel Engine Antifreeze/Coolant (DEAC) and Cat Extended Life Coolant (ELC) can be recycled. Consult your Cat dealer for more information.
- Cat Bio HYDO™ Advanced is a biodegradable hydraulic oil. Refer to "Caterpillar Machine Fluids Recommendations" (SEBU6250) for more information.
- Additional fluids are likely to be present, please consult the Operations and Maintenance Manual or the Application and Installation guide for complete fluid recommendations and maintenance intervals.

FEATURES AND TECHNOLOGY

- The following features and technology may contribute to fuel savings and/or carbon reduction. Features may vary. Consult your Cat dealer for details.
 - Standard Eco-mode limits engine RPM, lowering overall fuel consumption
 - Optional Compaction Meter Value (CMV) technology reduces unnecessary passes, increasing operating efficiency
 - Extended maintenance intervals reduce fluid and filter consumption

RECYCLING

- The materials included in machines are categorized as below with approximate weight percentage. Because of variations of product configurations, the following values in the table may vary.

Material Type	Weight Percentage
Steel	79.76%
Iron	8.64%
Nonferrous Metal	1.91%
Mixed Metal	0.04%
Mixed-Metal and Nonmetal	0.71%
Plastic	1.63%
Rubber	3.74%
Mixed Nonmetallic	0.00%
Fluid	1.38%
Other	1.46%
Uncategorized	0.73%
Total	100%

- A machine with higher recyclability rate will ensure more efficient usage of valuable natural resources and enhance End-of-Life value of the product. According to ISO 16714:2008 (Earthmoving machinery – Recyclability and recoverability – Terminology and calculation method), recyclability rate is defined as percentage by mass (mass fraction in percent) of the new machine potentially able to be recycled, reused or both.

All parts in the bill of material are first evaluated by component type based on a list of components defined by the ISO 16714:2008 and Japan CEMA (Construction Equipment Manufacturers Association) standards. Remaining parts are further evaluated for recyclability based on material type.

Because of variations of product configurations, the following value in the table may vary.

Recyclability – 96%

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For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at www.cat.com

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Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment.
See your Cat dealer for available options.

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QEHQ3351 (06-2026)
Build Number: 03B
(Aus-NZ, S Am [excluding Chile and Colombia])

