



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[®] C3.6 engine that meets U.S. EPA Tier 4 Final and EU Stage V emission standards.
- Eco-mode limits engine RPM helping to reduce fuel consumption.
- Engine Idle Shutdown Timer reduces fuel burn and unnecessary idle time by shutting down the machine after a pre-set idling period.
- 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.
- Automatic Speed Control and Auto-vibe functions help 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 floor mats 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.
- For machines equipped with a cab, an optional radio is available with USB ports and Bluetooth[®] technology enabled to connect your device and make hands-free calls.
- Low sound and vibration levels enhance comfort and productivity.



Cat® CS7 Smooth Drum Vibratory Soil Compactor

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.

Cat® CS7 Smooth Drum Vibratory Soil Compactor

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® C3.6 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)		✓	Engine Idle Shutdown Timer	✓	
Adjustable Deluxe Cloth High-back Air-ride Seat with Integrated Console (Cab)		✓	Dual Propel Pumps; One for Drum Drive, One for Rear Axle	✓	
Sun Visor (Cab)		✓	Fuel Filter, Water Separator, Priming Pump, Water Indicator	✓	
Roll-Down Sun Screen (Cab)		✓	Tilting Radiator / Hydraulic Oil Cooler	✓	
LCD Display with Lockable Vandalism Guard	✓		Dual Braking System	✓	
Adjustable Tilting Steering Column with Integrated Cup Holders	✓		Two-Speed Hydrostatic Transmission	✓	
High Visibility 76 mm (3 in) Seat Belt	✓		Transmission Guard		✓
12-Volt Power Outlet	✓		ELECTRICAL		
Horn, Backup Alarm	✓		12-Volt Electrical System	✓	
AM/FM Radio with Bluetooth®, AUX/USB ports, and Microphone (Cab)		✓	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		✓

Cat® CS7 Smooth Drum Vibratory Soil Compactor

Technical Specifications

Engine and Powertrain

Engine Model	Cat C3.6	
Meets U.S. EPA Tier 4 Final and EU Stage V emission standards.		
Engine Power @ 2,200 rpm ISO 14396	74.4 kW	99.8 hp
Gross Power @ 2,200 rpm SAE J1995	74.4 kW	99.8 hp
Net Power @ 2,200 rpm ISO 9249	70.2 kW	94.1 hp
Net Power @ 2,200 rpm SAE J1349	70.2 kW	94.1 hp
Number of Cylinders	4	
Displacement	3.6 L	221 in³
Stroke	120 mm	4.7 in
Bore	98 mm	3.9 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, clean emissions module, 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	20.1 kg/cm	112.6 lbs/in
ROPS/FOPS Cab	20.7 kg/cm	115.9 lbs/in

Weights

	Operating Weight		Weight at Drum	
ROPS/FOPS Canopy	7025 kg	15,487 lb	3360 kg	7,408 lb
Leveling Blade	7440 kg	16,402 lb	3910 kg	8,620 lb
Oval Padfoot Shell Kit	8100 kg	17,857 lb	4415 kg	9,733 lb
Oval Padfoot Shell Kit and Leveling Blade	8515 kg	18,772 lb	4965 kg	10,946 lb
Square Padfoot Shell Kit	8080 kg	17,813 lb	4395 kg	9,689 lb
Square Padfoot Shell Kit and Leveling Blade	8495 kg	18,728 lb	4945 kg	10,902 lb
ROPS/FOPS Cab	7310 kg	16,116 lb	3460 kg	7,628 lb
Leveling Blade	7725 kg	17,031 lb	4010 kg	8,841 lb
Oval Padfoot Shell Kit	8390 kg	18,497 lb	4515 kg	9,954 lb
Oval Padfoot Shell Kit and Leveling Blade	8800 kg	19,401 lb	5065 kg	11,166 lb
Square Padfoot Shell Kit	8365 kg	18,442 lb	4490 kg	9,899 lb
Square Padfoot Shell Kit and Leveling Blade	8775 kg	19,346 lb	5040 kg	11,111 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.

Cat® CS7 Smooth Drum Vibratory Soil Compactor

Technical Specifications

Dimensions

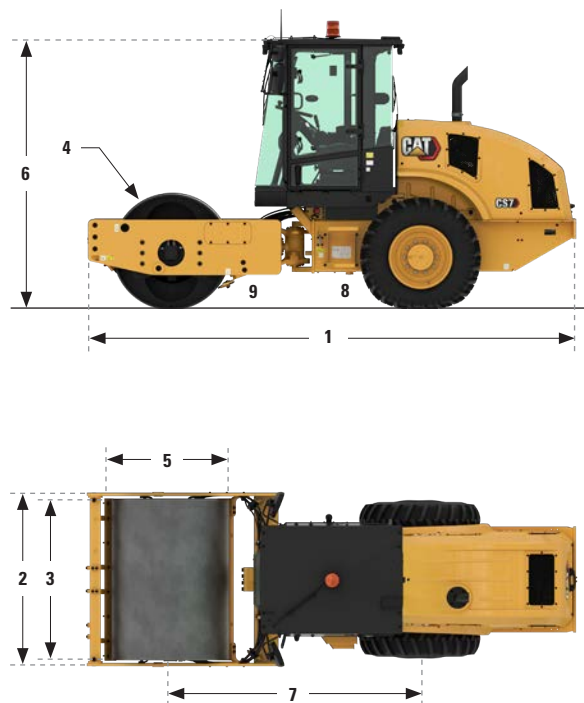
1	Overall Length	5091 mm	16.7 ft
	with optional Leveling Blade	5609 mm	18.4 ft
2	Overall Width	1800 mm	70.9 in
	with optional Leveling Blade	2121 mm	83.5 in
3	Drum Width	1676 mm	66 in
4	Drum Shell Thickness	25 mm	1 in
5	Drum Diameter	1221 mm	48.1 in
6	Overall Height		
	Canopy	2810 mm	9.2 ft
	Cab	2852 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
Diesel Exhaust Fluid (DEF) Tank	9 L	2.4 gal
Cooling System	18 L	4.8 gal
Heating System	1.2 L	0.3 gal
Engine Oil with Filter	10.6 L	2.8 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



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 C3.6 is available in configurations that meet U.S. EPA Tier 4 Final and EU Stage V emission standards.
- Cat diesel engines are required to use ULSD (ultra-low sulfur diesel fuel with 15 ppm of sulfur or less) and are compatible* with ULSD 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.

*While Caterpillar engines are compatible with these alternative fuels, some regions may not allow their use.

**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 or R1234yf. See the label or instruction manual for identification of the gas.

- If equipped with 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).
- If equipped with R1234yf (Global Warming Potential = 0.501), the system contains 0.94 kg (2.07 lb) of refrigerant which has a CO₂ equivalent of 0.001 metric tonnes (0.001 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) – 80 dB(A)

ISO 6396:2008 (non-cab) – 90 dB(A)

- External Sound – The labeled spectator sound power level represents the Guaranteed Value per 2000/14/EC, when properly equipped, and is measured according to the test procedures and conditions specified in ISO 6395:2008. 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
 - Engine Idle Shutdown Timer reduces unproductive hours and fuel burned

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%

Cat® CS7 Smooth Drum Vibratory Soil Compactor

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

© 2026 Caterpillar
All rights reserved

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

CAT, CATERPILLAR, LET'S DO THE WORK, their respective logos, "Caterpillar Corporate Yellow," the "Power Edge" and Cat "Modern Hex" trade dress as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.

VisionLink is a trademark of Caterpillar Inc., registered in the United States and in other countries.

QEHQ3349 (06-2026)
Build Number: 03B
(N Am, Europe, Chile, Colombia)

