Cat® CS13 GC

Smooth Drum Vibratory Soil Compactor

Cat® CS13 GC Vibratory Soil Compactors bring a balance of easy operation, low operating costs and performance-boosting technology to the jobsite. Using a proven vibratory system designed for high reliability, the CS13 GC smooth drum roller is ideally suited for granular soil applications or cohesive soil applications with the use of an optional padfoot shell kit.

Reliable Power

- The propel system is driven by a single pump design and is ideal for flat to moderate grades.
- Powered by a Cat® C3.6 engine that meets U.S. EPA Tier 4 Final, EU Stage V and Korea 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.

Comfortable and Ergonomic Operator Station

- The ISO-mounted operator station and rubber floormats help reduce noise and vibration for comfort during operation.
- Easy to use controls are grouped by function and a large display informs operators of machine performance.
- The seat, armrest and steering column are adjustable for all-day comfort.
- 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.
- Cab configurations can be upgraded to a deluxe high back air-ride seat to enhance operator comfort.

Safety Features

- Angled steps, handrails, and an antiskid surface help provide stability during entry and exit of the operator station.
- Internal and external mirrors are available to provide the operator with a broad view of the jobsite.
- Enhance visibility with an optional rear vision camera with large color touchscreen display for more complete operator control and safety.
- Optional operator presence seat sensor and seat belt switch.

Excellent Compaction Performance

- The exclusive pod-style eccentric weight vibratory system is designed to provide high reliability, smooth performance and low noise levels with a 3-year, 3000-hour maintenance interval.
- High static linear loads and amplitudes.
- The optional Traction Control system helps improve traction in soft underfoot conditions such as sand or loose material.
- The Auto-vibe function helps operators easily maintain consistent, high-quality compaction.
- Enhance machine versatility with the addition of an oval or square padfoot shell kit, allowing your smooth drum machine 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.

Enhance Quality and Productivity with Technology

- Optional Cat Compact technologies help you consistently meet compaction targets faster, more uniformly, and in fewer passes – saving on fuel and reducing rework and material costs.
  - Exclusive Machine Drive Power (MDP) is an energy-based measurement and can be used on all soil types in either static or vibratory mode.
  - Compaction Meter Value (CMV) is an accelerometer-based measurement for granular soils, measuring only when the vibratory system is active.

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Virtually Maintenance Free

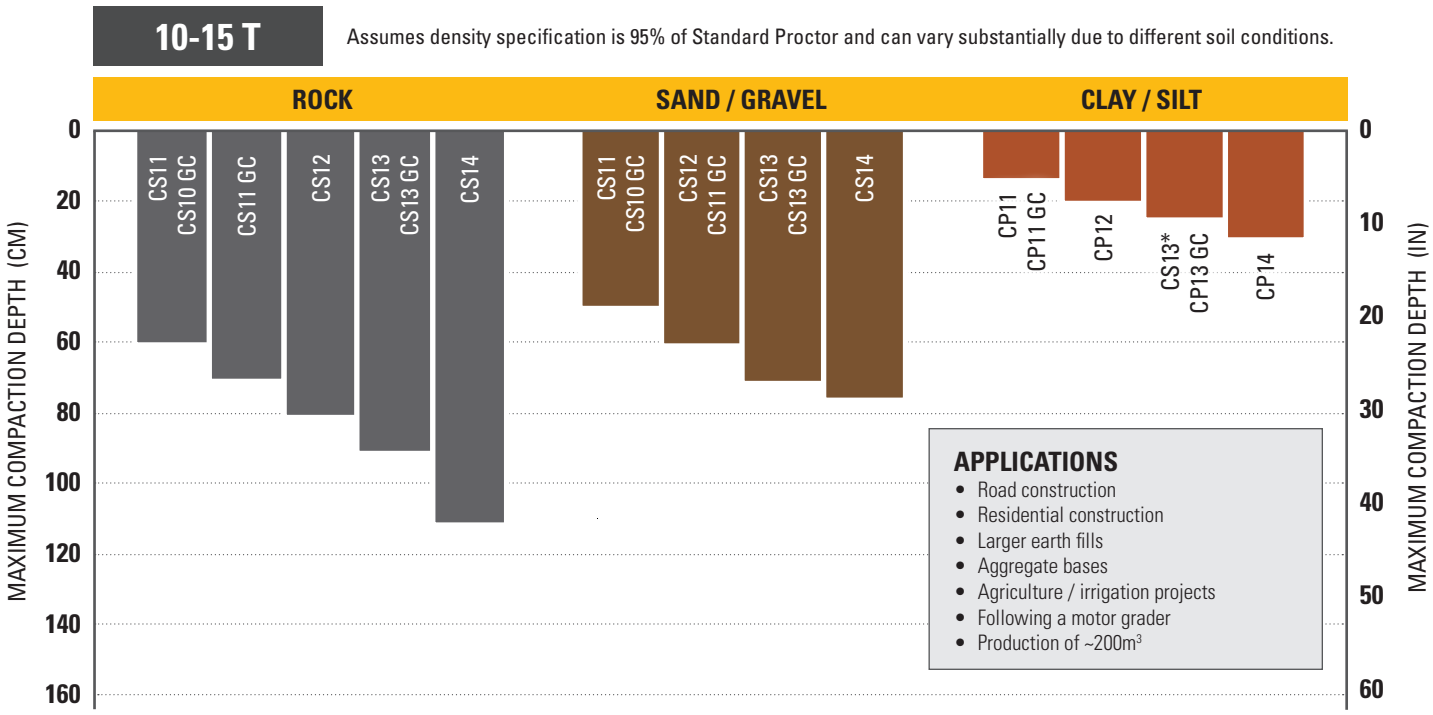
- The articulated hitch with sealed-for-life bearings does not require routine maintenance.
- Ground-level access to all maintenance points for easy service and fluid sampling.
- Monitor fluid conditions with regular sampling to help extend change intervals up to 500 hours engine oil, 3000 hours eccentric 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.
- Remote Flash allows you to update onboard software without a technician being present, allowing you to initiate software updates when convenient, increasing your overall operating efficiency**
- Remote Troubleshoot allows your Cat dealer to perform diagnostic testing on your connected machine remotely**

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

** *Must be within cell range coverage.*

Vibratory Soil Compactor Selection Guide

This chart helps you select which model is best suited for your work. Not all models listed are available in each region. Contact your Cat dealer representative for more information.



Rock
Smooth drum, high amplitude moving to low amplitude when approaching compaction, 4-8 passes

Size: Less than 50 mm (2 in) diameter

Sand / Gravel
Smooth drum, high amplitude moving to low amplitude when approaching compaction, 4-6 passes

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

* Smooth drum model equipped with padfoot shell kit

Standard and Optional Equipment

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

	Standard	Optional
OPERATOR ENVIRONMENT		
ROPS/FOPS Canopy with Handrails, Floor Mat, Interior Rear View Mirror	✓	
ROPS/FOPS Cab with Climate Control, Floor Mat, Exterior Rear View Mirrors		✓
Vinyl Suspension Seat	✓	
Deluxe High-back Air-ride Seat (Cab)		✓
Sun/Debris Shields (Canopy)		✓
Roll-down Sun Screen (Cab)		✓
Interior Rear View Mirror (Cab)		✓
Exterior Rear View Mirrors (Canopy)		✓
Adjustable Tilting Steering Column	✓	
Rear View Camera with Color Touchscreen Display		✓
High Visibility 76 mm (3 in) Seat Belt	✓	
12-Volt Power Outlet	✓	
Horn, Backup Alarm	✓	
Seat Belt Switch		✓
Sound Reduction Kit		✓
VIBRATORY SYSTEM		
Smooth Drum	✓	
Removable Shell Kit – Oval or Square Pads		✓
Pod-Style Eccentric Weight Housings	✓	
Dual Amplitude, Dual Frequency	✓	
Auto-vibe Function	✓	
MicroVibe™		✓
Rear Adjustable Steel Scraper	✓	
Dual Adjustable Steel Scrapers		✓
Dual Adjustable Polyurethane Scrapers		✓

	Standard	Optional
TECHNOLOGY SOLUTIONS		
VisionLink®	✓	
Remote Flash	✓	
Remote Troubleshoot	✓	
Remote Disable	✓	
Measure – Machine Drive Power (MDP)		✓
Measure – Compaction Meter Value (CMV)		✓
Machine Speed Sensor		✓
POWERTRAIN		
Cat® C3.6 Engine	✓	
Single Propel Pump	✓	
Fuel Filter, Water Separator, Priming Pump, Water Indicator	✓	
Eco-Mode	✓	
Radiator/Hydraulic Oil Cooler	✓	
Dual Braking System	✓	
Two-Speed Hydrostatic Transmission	✓	
Limited Slip Differential	✓	
Traction Control Basic		✓
Traction Control Advanced		✓
Transmission Guard		✓
ELECTRICAL		
12-Volt Electrical System	✓	
150-Amp Alternator	✓	
900 Cold-cranking Amps Battery Capacity	✓	
Battery Disconnect Switch	✓	
OTHER		
Sight Gauges for Hydraulic Oil Level and Radiator Coolant Level	✓	
Scheduled Oil Sampling (S•O•S℠) Ports: Engine Oil, Hydraulic Oil, and Coolant	✓	
High Ambient Hydraulic Oil (Factory Fill)		✓
Flotation Tread or Lug Tread Tires		✓
Working Lights (2 Forward, 2 Rear)	✓	
Upgraded Lighting Package (4 Forward, 4 Rear)		✓
Amber Rotating Beacon		✓

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Technical Specifications

Engine and Powertrain		
Engine Model	Cat C3.6	
Emissions	U.S. EPA Tier 4 Final, EU Stage V, Korea Stage V	
Engine Power – ISO 14396:2002	90 kW	121 hp
Gross Power – SAE J1995:2014	91.7 kW	122.9 hp
Net Power – ISO 9249:2014*	83.7 kW	112.2 hp
Net Power – SAE J1349:2011*	82.9 kW	111.2 hp
Number of Cylinders	4	
Displacement	3.6 L	219.7 in^3
Stroke	120 mm	4.7 in
Bore	98 mm	3.9 in
Maximum Travel Speed	11 km/h	6.84 mph
Traction Control Advanced	10 km/h	6.2 mph
Theoretical Gradeability, with or without vibration**	50%	

* *Net power advertised is the power available at the engine flywheel when equipped with a fan at maximum speed, 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		
Nominal Amplitude – High	2 mm	0.079 in
Frequency at High Idle	30 Hz	1800 vpm
Frequency at Eco-Mode	28.6 Hz	1716 vpm
Nominal Amplitude – Low	1 mm	0.039 in
Frequency at High Idle	33 Hz	1980 vpm
Frequency at Eco-Mode	31.5 Hz	1890 vpm
Centrifugal Force		
Maximum @ 30 Hz (1800 vpm)	250 kN	56,200 lb
Minimum @ 33 Hz (1980 vpm)	149 kN	33,500 lb
VM Class at High Amplitude (Cab Configuration)	VM3	
MicroVibe Nominal Amplitude @ 33 Hz (1980 vpm)		
High	1.19 mm	0.047 in
Low	0.21 mm	0.008 in
MicroVibe Centrifugal Force @ 33 Hz (1980 vpm)		
Maximum	176 kN	39,566 lb
Minimum	31 kN	6969 lb
MicroVibe VM Class at High Amplitude (Cab Configuration)	VM2	
Static Linear Load		
ROPS/FOPS Canopy	36 kg/cm	201.8 lbs/in
ROPS/FOPS Cab	36.2 kg/cm	202.9 lbs/in

Weights		
Operating Weight		
ROPS/FOPS Canopy	12 501 kg	27,560 lb
Oval Padfoot Shell Kit	13 169 kg	29,033 lb
Square Padfoot Shell Kit	13 328 kg	29,383 lb
Padfoot Bumper (no shell)	11 652 kg	25,688 lb
ROPS/FOPS Cab	12 655 kg	27,900 lb
Oval Padfoot Shell Kit	13 323 kg	29,372 lb
Square Padfoot Shell Kit	13 482 kg	29,723 lb
Padfoot Bumper (no shell)	11 806 kg	26,028 lb
Weight at Drum		
ROPS/FOPS Canopy	7691 kg	16,955 lb
Oval Padfoot Shell Kit	7979 kg	17,590 lb
Square Padfoot Shell Kit	8138 kg	17,940 lb
Padfoot Bumper (no shell)	6462 kg	14,245 lb
ROPS/FOPS Cab	7734 kg	17,051 lb
Oval Padfoot Shell Kit	8022 kg	17,685 lb
Square Padfoot Shell Kit	8181 kg	18,036 lb
Padfoot Bumper (no shell)	6505 kg	14,341 lb

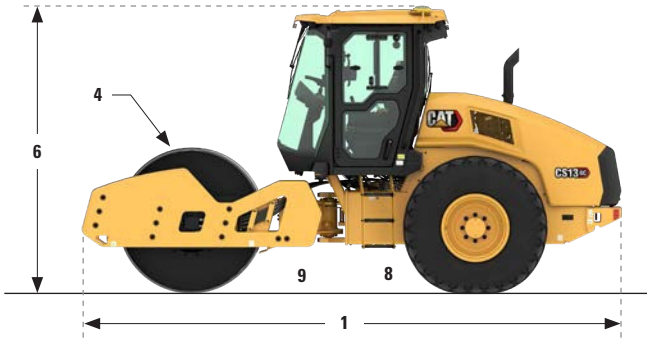
Operating weights are approximate and consider full fluids and 75 kg (165 lb) operator. Cab weights include heat and air conditioning.

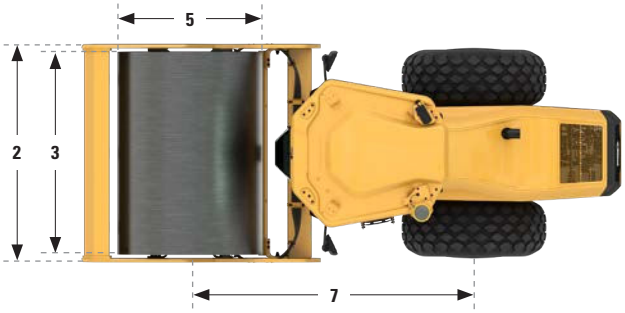
Service Refill Capacities		
Fuel Tank (total capacity)	213 L	56.3 gal
Diesel Exhaust Fluid (DEF) Tank	19 L	5 gal
Cooling System	18.5 L	4.9 gal
Engine Oil with Filter	11.6 L	3.1 gal
Eccentric Weight Housings (combined)	26 L	6.9 gal
Axle and Final Drives	10 L	2.6 gal
Hydraulic Tank	23 L	6.1 gal

Technical Specifications

Dimensions			
1	Overall Length	5.7 m	18.7 ft
2	Overall Width	2.3 m	7.5 ft
3	Drum Width	2134 mm	84 in
4	Drum Shell Thickness	25 mm	1 in
5	Drum Diameter	1535 mm	60.4 in
6	Overall Height	3 m	9.8 ft
	Padfoot Shell Kit	3.03 m	9.9 ft
7	Wheelbase	3 m	9.8 ft
8	Ground Clearance	518 mm	20.4 in
9	Curb Clearance	492 mm	19.4 in
	Inside Turning Radius	3.9 m	12.7 ft
	Hitch Articulation Angle	34°	
	Hitch Oscillation Angle	15°	

Optional Padfoot Shell Kits		
Number of Pads	120	
Number of Chevrons	16	
Oval Pads		
Pad Height	89.8 mm	3.5 in
Pad Face Area	63.5 cm^2	9.8 in^2
Square Pads		
Pad Height	89.8 mm	3.5 in
Pad Face Area	105.7 cm^2	16.4 in^2





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, EU Stage V and Korea Stage V emission standards.
- Cat diesel engines are required to use ULSD (ultra-low sulfur diesel fuel with 15 ppm of sulfur or less) or 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.

**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 2.2 kg (4.91 lb) of refrigerant, which has a CO_2 equivalent of 3.146 metric tonnes (3.468 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 < 0.01%
  - – Cadmium < 0.01%
  - – Chromium < 0.01%
  - – Lead < 0.01%

SOUND PERFORMANCE

With cooling fan speed at maximum value:

Operator Sound Pressure Level (ISO 6396:2008) – 81 dB(A)

Exterior Sound Power Level (ISO 6395:2008) – 107 dB(A)

- The operator 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.
- The exterior 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.
- 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 an EU Ecolabel approved biodegradable hydraulic oil.
- 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 control 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	70.76%
Iron	10.61%
Mixed-Metal and Nonmetal	8.14%
Uncategorized	3.91%
Fluid	2.37%
Nonferrous Metal	1.64%
Other	0.97%
Rubber	0.84%
Plastic	0.48%
Mixed Metal	0.25%
Mixed Nonmetallic	0.01%
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 – 95%

Cat® CS13 GC Smooth Drum Vibratory Soil Compactor

QEHQ3128-01 (12-2024)
Build Number: 01A
(U.S. EPA Tier 4 Final, EU Stage V,
Korea Stage V)

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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