



Cat[®] CS12 GC

Smooth Drum Vibratory Soil Compactor

The Cat[®] CS12 GC features a smooth drum and is ideally suited for granular soil applications with the use of an optional padfoot shell kit for cohesive soil applications.

Superior Compaction Performance

- High weight at the drum and high amplitude deliver superior compaction performance

Comfortable and Ergonomic Operator Station

- Simple controls are within reach
- Outstanding visibility to the front and rear of the machine

Proven and Exclusive Cat Features

- Includes the ultra-reliable pod-style vibratory system and sealed-for-life hitch bearing

Reliable Cat Engine

- The Cat engine provides ample power and consistent performance
- Standard Eco-mode reduces fuel use during normal operation

Simple Maintenance

- Maintenance-free hitch bearings and extended maintenance intervals for vibratory system and hydraulic system provide more uptime and lower maintenance costs

Optional Cat Compaction Control Technology

- Compaction control helps the operator determine when compaction has been completed to specification for greater productivity and uniform compaction quality
- Scalable solutions can be configured to meet customer needs



Cat® CS12 GC Smooth Drum Vibratory Soil Compactor

Standard and Optional Equipment

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

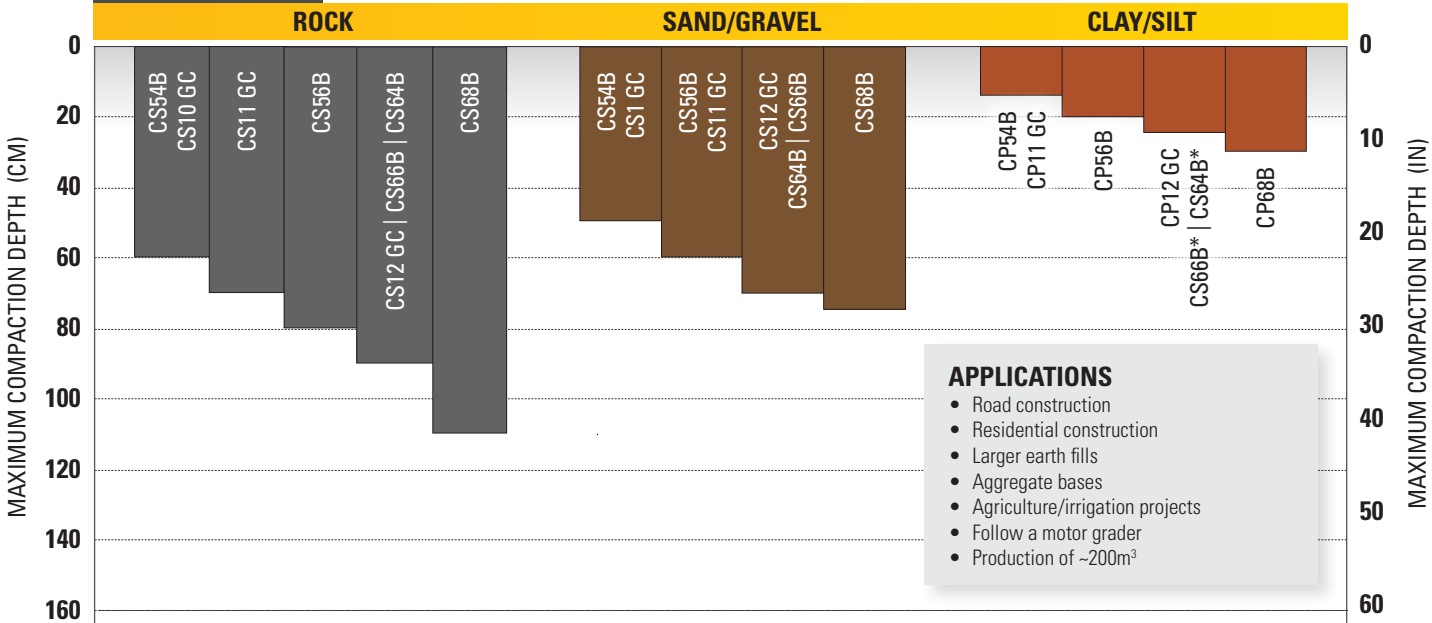
	Standard	Optional		Standard	Optional
OPERATOR ENVIRONMENT			POWERTRAIN		
Sun Canopy with Platform Handrails/ Guardrails, Floor Mat	✓		Cat® C4.4 Diesel Engine, 4-cylinder	✓	
Vinyl Adjustable Seat, Seat Belt	✓		Single Propel Pump	✓	
Adjustable Tilting Steering Column	✓		Dual Fuel Filter, Water Separator, Priming Pump, Water Indicator	✓	
12-volt Power Outlet	✓		Radiator/Hydraulic Oil Cooler, Charge Air Cooler	✓	
Horn, Backup Alarm	✓		Dual Braking System	✓	
Internal Rear View Mirror	✓		Two-Speed Hydrostatic Transmission	✓	
ROPS/FOPS Canopy with Handrails/ Guardrails, Floormat		✓	Transmission Guard		✓
ROPS/FOPS Cab with Climate Control		✓	TECHNOLOGY SOLUTIONS		
Rear View Camera with Color Touchscreen Display (Cab)		✓	Measure - Machine Drive Power and/or CMV		✓
Sun/Debris Shields (Canopy)		✓	Map - SBAS GNSS Mapping		✓
Cab Internal Roll-down Sun Screen (Cab)		✓	Connect - Machine-to-Machine Communication		✓
Sound Reduction Kit		✓	ELECTRICAL		
Sun Visor (Cab)		✓	12-volt Electrical System	✓	
Vinyl Suspension Seat with Arm Rest		✓	120 ampere Alternator	✓	
Deluxe High-Back Air-ride Seat (Cab)		✓	900 Cold-Cranking Amps Battery Capacity	✓	
VIBRATORY SYSTEM			OTHER		
Smooth Drum	✓		Product Link™	✓	
Dual Amplitude, Dual Frequency	✓		Sight Gauges for Hydraulic Oil Level and Radiator Coolant Level	✓	
Pod-Style Eccentric Weight Housings	✓		S•O•S SM Sampling Valves: Engine Oil, Hydraulic Oil, and Coolant	✓	
Auto-Vibe Function	✓		High Ambient Temperature Oil Factory Fill		✓
Rear Adjustable Steel Scraper	✓		Additional External Rear View Mirror		✓
Padfoot Shell Kit (oval or square pads available)		✓	Upgraded LED Light Package		✓
Dual Adjustable Steel Scrapers		✓	Amber Rotating Beacon		✓
Dual Adjustable Polyurethane Scrapers		✓	Lug Tread Tires		✓

Cat® CS12 GC Smooth Drum Vibratory Soil Compactor

Vibratory Soil Compactor Selection Guide

10 - 15 T

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



- APPLICATIONS**
- Road construction
 - Residential construction
 - Larger earth fills
 - Aggregate bases
 - Agriculture/irrigation projects
 - Follow a motor grader
 - Production of ~200m³

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 smoothing), 4-10 passes. Compaction in cohesive soils strongly depends on moisture content.
 * Smooth drum model equipped with padfoot shell kit

Cat® CS12 GC Smooth Drum Vibratory Soil Compactor

Technical Specifications

Engine - Powertrain

Engine Model	Cat® C4.4	
Emissions	Brazil MAR-1, equivalent to U.S. EPA Tier 3 and EU Stage IIIA	
Engine Power ISO14396:2002	83.0 kW	111.3 hp
Gross Power SAE J1995:2014	83.8 kW	112.4 hp
Net Power ISO 9249:2007*	79.4 kW	106.5 hp
Net Power SAE J1349:2011*	78.5 kW	105.3 hp
Displacement	4.4 L	268.5 in ³
Stroke	127 mm	5.0 in
Bore	105 mm	4.1 in
Max. Travel Speed (Forward or Reverse)	11.0 km/h	6.8 mph
Theoretical Gradeability, with or without vibration**	50%	

Vibratory System Specifications

Nominal Amplitude - High	2.0 mm	0.079 in
Frequency at High Idle	30.0 Hz	1800 vpm
Frequency at Eco-Mode	28.6 Hz	1716 vpm
Nominal Amplitude - Low	1.0 mm	0.039 in
Frequency at High Idle	33.0 Hz	1980 vpm
Frequency at Eco-Mode	31.5 Hz	1890 vpm
Centrifugal Force		
Maximum	250 kN	26,200 lb
Minimum	149 kN	33,500 lb
Static Linear Load		
w/ Sun Canopy	35.8 kg/cm	200.6 lbs/in
w/ ROPS/FOPS Canopy	36.2 kg/cm	202.5 lbs/in
w/ ROPS/FOPS Cab	36.4 kg/cm	203.6 lbs/in
French Classification, data/class w/ ROPS/FOPS Cab	51.4	VM3

Service Refill Capacities

Fuel Tank, total capacity	248 L	65.6 gal
Cooling System	18.5 L	4.9 gal
Engine Oil w/ Filter	9.5 L	2.5 gal
Eccentric Weight Housings (combined)	26 L	6.9 gal
Axle and Final Drives	10 L	2.6 gal
Hydraulic Tank (service refill)	23 L	6.1 gal

Weights***

Operating Weight w/ Sun Canopy	12 321
w/ Oval Padfoot Shell Kit	12 989
w/ Square Padfoot Shell Kit	13 148
w/ Padfoot Bumper, no shell	11 472
Operating Weight w/ ROPS/FOPS Canopy	12 499
w/ Oval Padfoot Shell Kit	13 167
w/ Square Padfoot Shell Kit	13 326
w/ Padfoot Bumper, no shell	11 650
Operating Weight w/ ROPS/FOPS Cab	12 653
w/ Oval Padfoot Shell Kit	13 321
w/ Square Padfoot Shell Kit	13 480
w/ Padfoot Bumper, no shell	11 804
Weight at Drum w/ Sun Canopy	7646
w/ Oval Padfoot Shell Kit	7934
w/ Square Padfoot Shell Kit	8093
w/ Padfoot Bumper, no shell	6417
Weight at Drum w/ ROPS/FOPS Canopy	7715
w/ Oval Padfoot Shell Kit	8003
w/ Square Padfoot Shell Kit	8162
w/ Padfoot Bumper, no shell	6486
Weight at Drum w/ ROPS/FOPS Cab	7758
w/ Oval Padfoot Shell Kit	8046
w/ Square Padfoot Shell Kit	8205
w/ Padfoot Bumper, no shell	6529

* 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.

*** Standard operating weight considers full fuel tank, 75 kg operator, flotation tires, padfoot drum, and cab with A/C.

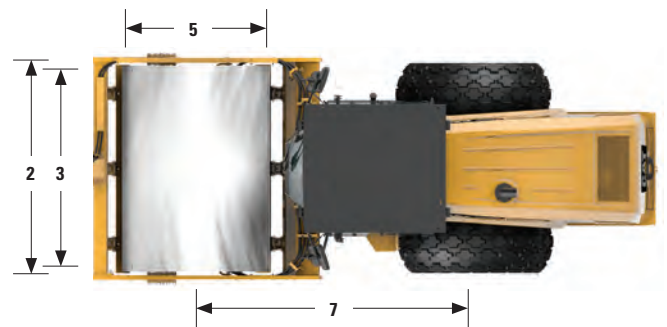
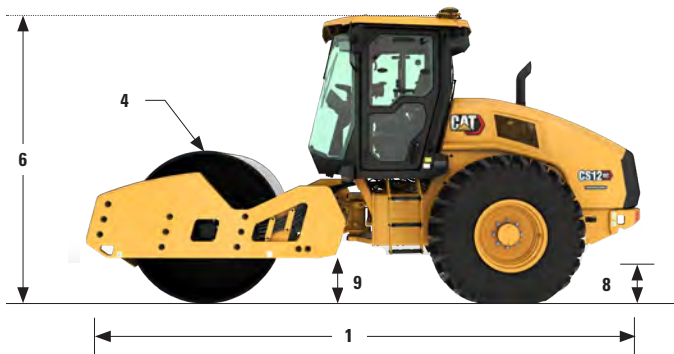
The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 2.2 kg of refrigerant, which has a CO² equivalent of 3.146 metric tonnes.

Cat® CS12 GC Smooth Drum Vibratory Soil Compactor

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	3.0 m	9.8 ft
	w/ Padfoot Shell Kit option	3.0 m	9.8 ft
7	Wheelhouse	3.0 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 Kit Specifications			
Number of Pads		120	
Pad Height, oval pads		89.8 mm	3.5 in
Pad Face Area, oval pads		63.5 cm ²	9.8 in ²
Pad Height, square pads		89.8 mm	3.5 in
Pad Face Area, square pads		105.7 cm ²	16.4 in ²
Number of Chevrons		16	



Cat® CS12 GC Smooth Drum Vibratory Soil Compactor

Cat® CS12 GC Smooth Drum Vibratory Soil Compactor



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

© 2022 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.

QEHQ2429-04 (10-2022)
Build Number: 01A
LRC

