



# Cat<sup>®</sup> CS12 GC

## *Smooth Drum Vibratory Soil Compactor*

*The Cat<sup>®</sup> 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



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## Standard and Optional Equipment

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

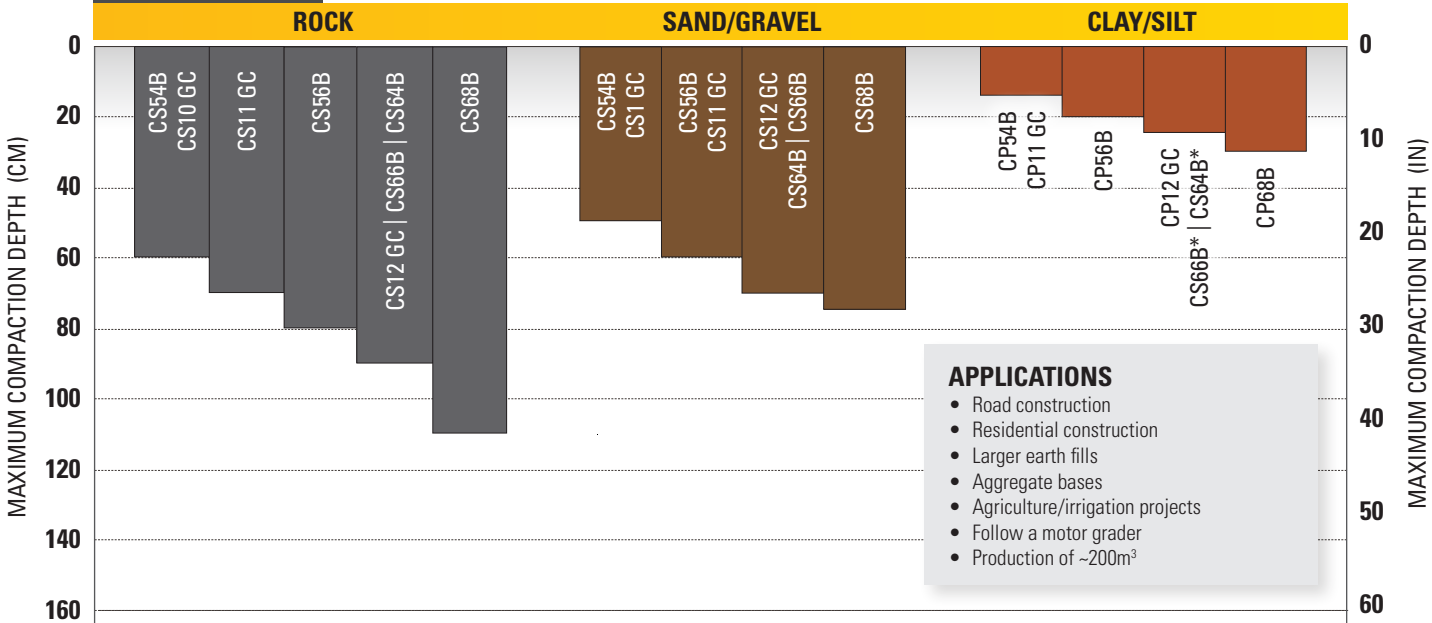
	Standard	Optional		Standard	Optional
<b>OPERATOR ENVIRONMENT</b>			<b>POWERTRAIN</b>		
Sun Canopy with Platform Handrails/ Guardrails, Floor Mat	✓		Cat® C4.4 Diesel Engine, 4-cylinder	✓	
Vinyl Adjustable Seat, Seat Belt	✓		Single Propel Pump	✓	
Adjustable Tilting Steering Column	✓		Dual Fuel Filter, 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		✓	<b>TECHNOLOGY SOLUTIONS</b>		
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		✓	<b>ELECTRICAL</b>		
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	✓	
<b>VIBRATORY SYSTEM</b>			<b>OTHER</b>		
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 <sup>SM</sup> 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		✓

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## 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 ~200m<sup>3</sup>

**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

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## 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 <sup>3</sup>	
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 kg	27,163 kg	
w/ Oval Padfoot Shell Kit	12 989 kg	28,636 kg	
w/ Square Padfoot Shell Kit	13 148 kg	28,986 kg	
w/ Padfoot Bumper, no shell	11 472 kg	29,035 kg	
Operating Weight w/ ROPS/FOPS Canopy	12 499 kg	27,556 kg	
w/ Oval Padfoot Shell Kit	13 167 kg	29,035 kg	
w/ Square Padfoot Shell Kit	13 326 kg	29,379 kg	
w/ Padfoot Bumper, no shell	11 650 kg	29,427 kg	
Operating Weight w/ ROPS/FOPS Cab	12 653 kg	27,895 kg	
w/ Oval Padfoot Shell Kit	13 321 kg	29,028 kg	
w/ Square Padfoot Shell Kit	13 480 kg	29,379 kg	
w/ Padfoot Bumper, no shell	11 804 kg	29,427 kg	
Weight at Drum w/ Sun Canopy	7646 kg	16,857 kg	
w/ Oval Padfoot Shell Kit	7934 kg	18,329 kg	
w/ Square Padfoot Shell Kit	8093 kg	18,680 kg	
w/ Padfoot Bumper, no shell	6417 kg	18,728 kg	
Weight at Drum w/ ROPS/FOPS Canopy	7715 kg	17,009 kg	
w/ Oval Padfoot Shell Kit	8003 kg	18,481 kg	
w/ Square Padfoot Shell Kit	8162 kg	18,832 kg	
w/ Padfoot Bumper, no shell	6486 kg	18,880 kg	
Weight at Drum w/ ROPS/FOPS Cab	7758 kg	17,103 kg	
w/ Oval Padfoot Shell Kit	8046 kg	18,576 kg	
w/ Square Padfoot Shell Kit	8205 kg	18,927 kg	
w/ Padfoot Bumper, no shell	6529 kg	18,975 kg	

\* 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.

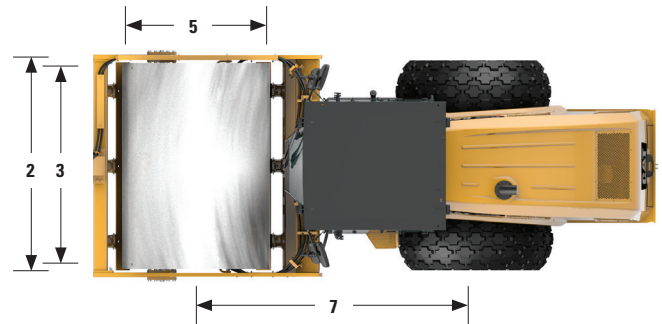
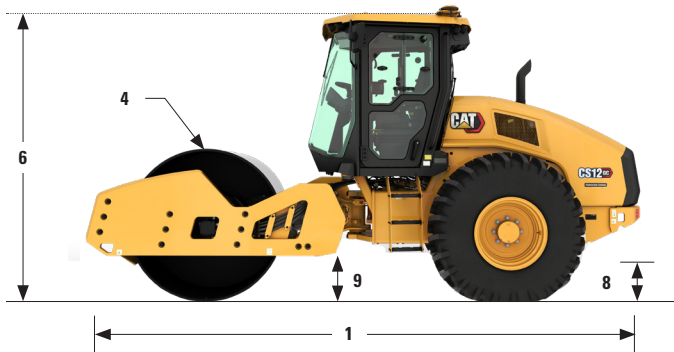
The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 2.2 kg of refrigerant, which has a CO<sup>2</sup> equivalent of 3.146 metric tonnes.

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## 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	Wheelbase	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 <sup>2</sup>	9.8 in <sup>2</sup>
Pad Height, square pads		89.8 mm	3.5 in
Pad Face Area, square pads		105.7 cm <sup>2</sup>	16.4 in <sup>2</sup>
Number of Chevrons		16	



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QEHQ2429-05 (03-2023)  
Build Number: 01A  
(AME, ANX, China, Eurasia, S Am)

