CS12 GC

Vibratory Soil Compactor

Technical Specifications

Configurations and features may vary by region. Please consult your Cat® dealer for availabity in your area.

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ENGINE		
Engine Model	Cat® C3.6	
Engine Power - ISO 14396:2002	90 kW	120.7 hp
Gross Power - SAE J1995:2014	91.7 kW	123 hp
Net Power - ISO 9249:2007	83.7 kW	112.2 hp
Net Power - SAE J1349:2011	82.9 kW	111.2 hp
Displacement	3.6 L	219.7 in^3
Stroke	120 mm	4.7 in
Bore	98 mm	3.9 in

- Cat C3.6 engine meets U.S. EPA Tier 4 Final / EU Stage V emission standards.
- The power ratings apply at an engine speed of 2,000 rpm when tested under the conditions for the specified standard in effect at the time of manufacture. The stated speed is when tested under the reference conditions for the specified standards.
- 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 with engine speed at 2,000 rpm.
- The gross power advertised is with the fan at maximum speed.

SERVICE REFILL CAPACITIES		
Fuel Tank (total capacity)	213 L	56.3 gal
Diesel Exhaust Fluid (DEF) refill capacity	19 L	5.0 gal
Cooling System	18.5 L	4.9 gal
Engine Oil w/ 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 (service refill)	23 L	6.1 gal

SOUND PERFORMANCE (declared)	
ISO 6393:2008 (external)	107 dB(A)
ISO 6394:2008 (inside cab)	81 dB(A)

SOUND PERFORMANCE (tested)

- The declared static operator sound pressure level is measured according to the static test procedures and conditions that are specified in ISO 6394 (interior) and ISO 6393 (exterior). The sound level may vary at different engine and/or cooling fan speeds. The measurement was conducted with the cab doors and the cab windows closed. The cab was properly installed and maintained.
- Hearing protection may be needed when operating with an open operator station and cab (when not properly maintained or doors/windows open) for extended periods or in a noisy environment.

STANDARDS	
Brakes	Brakes meet ISO 3450:2011 standards
Cab/ROPS	ROPS/FOPS meet ISO 3471:2008 and ISO 3449:2005 Level II standards

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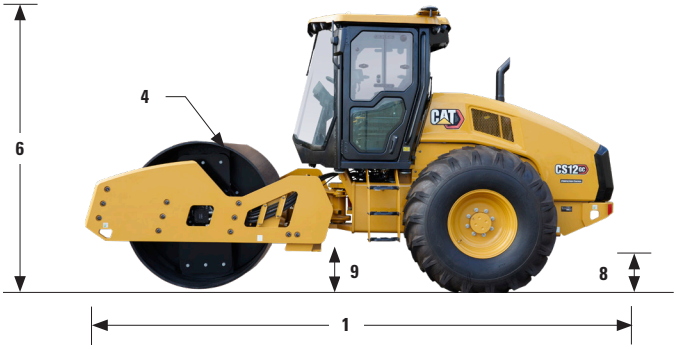
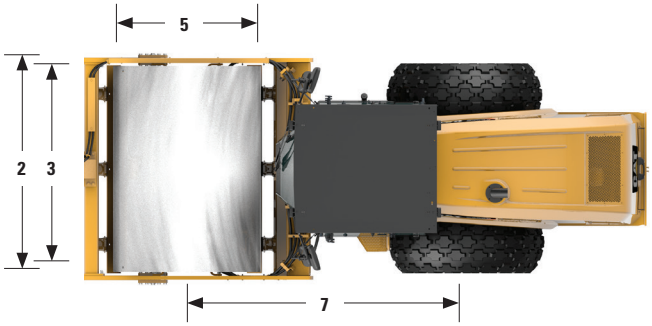
DIMENSIONS

All dimensions are approximate





1 Overall Length	5.70 m	18.71 ft
2 Overall Width	2.30 m	7.53 ft
3 Drum Width	2134 mm	84 in
4 Drum Shell Thickness	25 mm	0.98 in
5 Drum Diameter	1535 mm	60.4 in
6 Overall Height		
Smooth Drum	3.0 m	9.8 ft
Optional Shell kit equipped	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	3.86 m	12.7 ft
Hitch Articulation Angle	34°	
Hitch Oscillation Angle	15°	

PADFOOT SPECIFICATION

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	105.6 cm^2	16.4 in^2
Number of Chevrons	16	

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DRIVE		
Max. Travel Speed		
High Idle	11 km/h	6.84 mph
Eco-mode	9.4 km/h	5.84 mph
Max. Working Speed		
High Idle	5.6 km/h	3.5 mph
Eco-mode	5.0 km/h	3.1 mph
Rimpull	57 kN	12,814 lbf
Theoretical Gradeability, with or without vibration	50%	

- Maximum Travel speeds is measure with smooth drum and diamond tire configured.
- Actual gradeability may vary based on site conditions and machine configuration. Refer to the Operation and Maintenance Manual for more information.

VIBRATION SYSTEM		
Nominal Amplitude - High	2.0 mm	0.079 in
Standard Frequency	30 Hz	1800 vpm
Eco-mode Frequency	28.6 Hz	1716 vpm
Nominal Amplitude - Low	1.0 mm	0.039 in
Frequency	33 Hz	1980 vpm
Eco-mode Frequency	31.5 Hz	1890 vpm
Centrifugal Force		
Maximum	250 kN	56 202 lbf
Minimum	149 kN	33 497 lbf
w/ Oval Padfoot		
Nominal Amplitude - High	1.41 mm	0.06 in
Standard Frequency	30 Hz	1800 vpm
Eco-mode Frequency	28.6 Hz	1716 vpm
Nominal Amplitude - Low	0.67 mm	0.03 in
Frequency	33 Hz	1980 vpm
Eco-mode Frequency	31.5 Hz	1890 vpm
w/ Square Padfoot		
Nominal Amplitude - High	1.37 mm	0.05 in
Standard Frequency	30 Hz	1800 vpm
Eco-mode Frequency	28.6 Hz	1716 vpm
Nominal Amplitude - Low	0.65 mm	0.03 in
Frequency	33 Hz	1980 vpm
Eco-mode Frequency	31.5 Hz	1890 vpm

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OPERATION SPECIFICATIONS	ROPS/FOPS Canopy		ROPS/FOPS Cab	
Operating Weight - Standard	**12 501 kg**	**27,560 lb**	**12 655 kg**	**27,900 lb**
At Drum	7691 kg	16,955 lb	7734 kg	17,051 lb
Static Linear Load	36.0 kg/cm	201.8 lb/in	36.2 kg/cm	202.9 lb/in
French Classification, data/class				
High Amplitude	51.0	VM3	51.3	VM3
Low Amplitude	36.0	VM2	36.2	VM2
w/ Oval Shell Kit	**13 169 kg**	**29,033 lb**	**13 323 kg**	**29,372 lb**
At Drum	7979 kg	17,590 lb	8022 kg	17,685 lb
French Classification, data/class				
High Amplitude	44.4	VM3	44.6	VM3
Low Amplitude	30.6	VM2	30.8	VM2
w/ Square Shell Kit	**13 328 kg**	**29,383 lb**	**13 482 kg**	**29,723 lb**
At Drum	8138 kg	17,940 lb	8181 kg	18,036 lb
French Classification, data/class				
High Amplitude	44.6	VM3	44.9	VM3
Low Amplitude	30.7	VM2	30.9	VM2
w/ Padfoot Bumper, no shell	**11 652 kg**	**25,688 lb**	**11 806 kg**	**26,028 lb**
At Drum	6462 kg	14,245 lb	6505 kg	14,341lb
Static Linear Load	30.3 kg/cm	169.6 lb/in	30.5 kg/cm	170.7 lb/in
French Classification, data/class				
High Amplitude	42.8	VM3	43.1	VM3
Low Amplitude	30.3	VM2	30.5	VM2

- All operating weights and Static Linear Load shown are based on standard configuratios with full level fluids, 75 kg operator, smooth/shell kit drum w/ diamond tires, padded drum w/bar tread tires and cab w/ heat & A/C.

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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/Guardrails, Floor Mat	✓	
Vinyl Adjustable Seat, Seat Belt	✓	
Adjustable Tilting Steering Column	✓	
12-volt Power Outlet	✓	
Horn, Backup Alarm	✓	
Internal Rear View Mirror	✓	
ROPS/FOPS Cab with Climate Control		✓
Deluxe High-back Air-ride seat (Cab)		✓
Sun/Debris Shields (Canopy)		✓
Cab Internal Roll-down Sun Screen (Cab)		✓
Rear View Camera with Color Touchscreen Display		✓
Sound Reduction Kit		✓
VIBRATORY SYSTEM		
Smooth Drum	✓	
Dual Amplitude, Dual Frequency	✓	
Pod-Style Eccentric Weight Housings	✓	
Auto-vibe Function	✓	
Rear Adjustable Steel Scraper	✓	
Padfoot Shell Kit (oval or square pads available)		✓
Dual Adjustable Steel Scrapers		✓
Dual Adjustable Polyurethane Scrapers		✓
TECHNOLOGY SOLUTIONS		
Measure - Machine Drive Power and/or CMV		✓
Map - SBAS GNSS Mapping		✓
Connect - Cloud and Machine Connectivity		✓

	Standard	Optional
POWER TRAIN		
Cat C3.6 Diesel Engine, 4 cylinder	✓	
Single Propel Pump	✓	
Fuel Filter, Water Separator, Priming Pump, Water Indicator	✓	
Radiator/Hydraulic Oil Cooler	✓	
Dual Braking System	✓	
Two-speed Hydrostatic Transmission	✓	
Transmission Guard		✓
ELECTRICAL		
12 volt Electrical System	✓	
150 ampere Alternator	✓	
900 Cold-cranking Amps Battery Capacity	✓	
OTHER		
Product Link™	✓	
Sight Gauges for Hydraulic Oil Level and Radiator Coolant Level	✓	
S·O·S℠ Sampling Valves: Engine Oil, Hydraulic Oil and Coolant	✓	
High Ambient Temperature Oil Factory Fill		✓
Additional Rear View Mirror		✓
Printer Port		✓
Seat Belt Switch		✓
Upgraded LED Light Package		✓
Amber Rotating Beacon		✓
Flotation Tread or Lug Tread Tires		✓

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) or ULSD blended with the following lower-carbon intensity fuels up to:
  - ✓ 20% biodiesel FAME (fatty acid methyl ester)
  - ✓ 100% renewable diesel, HVO (hydrogenated 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.

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 (4.9 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) – 76 dB(A)

Exterior Sound Power Level (ISO 6395:2008) – 109 dB(A)

- When properly installed and maintained, the cab offered by Caterpillar, when tested with doors and windows closed according to ANSI/SAE J1166 OCT98, meets OSHA and MSHA requirements for operator sound exposure limits in effect at time of manufacture.
- Hearing protection may be needed when operating with an open operator station and cab (when not properly maintained or doors/windows open) for extended periods or in a noisy environment.

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 by up to 10% compared to high idle
  - Optional compaction control reduces unnecessary passes, contributing to lower overall fuel consumption
  - Extended maintenance intervals reduce fluid and filter consumption
  - Auto engine idle shutdown 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	71.29%
Iron	11.72%
Other	6.48%
Fluid	3.67%
Uncategorized	3.58%
Nonferrous Metal	1.56%
Rubber	0.85%
Plastic	0.56%
Mixed Metal	0.28%
Mixed Nonmetallic	0.01%
Total	100.00%

- 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 (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 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**

QEXQ2867-01 (06-2022)