



Cat[®] CS54B

Smooth Drum Vibratory Soil Compactor

The Cat[®] CS54B features a smooth drum and is ideally suited for granular soil applications or cohesive soil applications with the use of an optional padfoot shell kit.

Comfortable and Ergonomic Operator Station

- Features pivoting seat with integrated multifunction LCD display and control console.
- Outstanding visibility to the front and rear of machine
- Low sound levels and vibration for greater operator comfort and productivity.

Rear Vision Camera

- The rear vision camera enhances visibility for more complete operator control and safety.

Exceptional Propel System

- Built around the exclusive Cat dual pump propel system, two pumps provide separate dedicated flow to drum drive motor and rear axle motor for exceptional gradeability and traction in forward and reverse.

Virtually Maintenance Free

- Maintenance-free hitch bearings.
- Extended maintenance intervals for vibratory system and hydraulic system, providing more uptime and lower maintenance costs.

Enhanced Compaction Performance

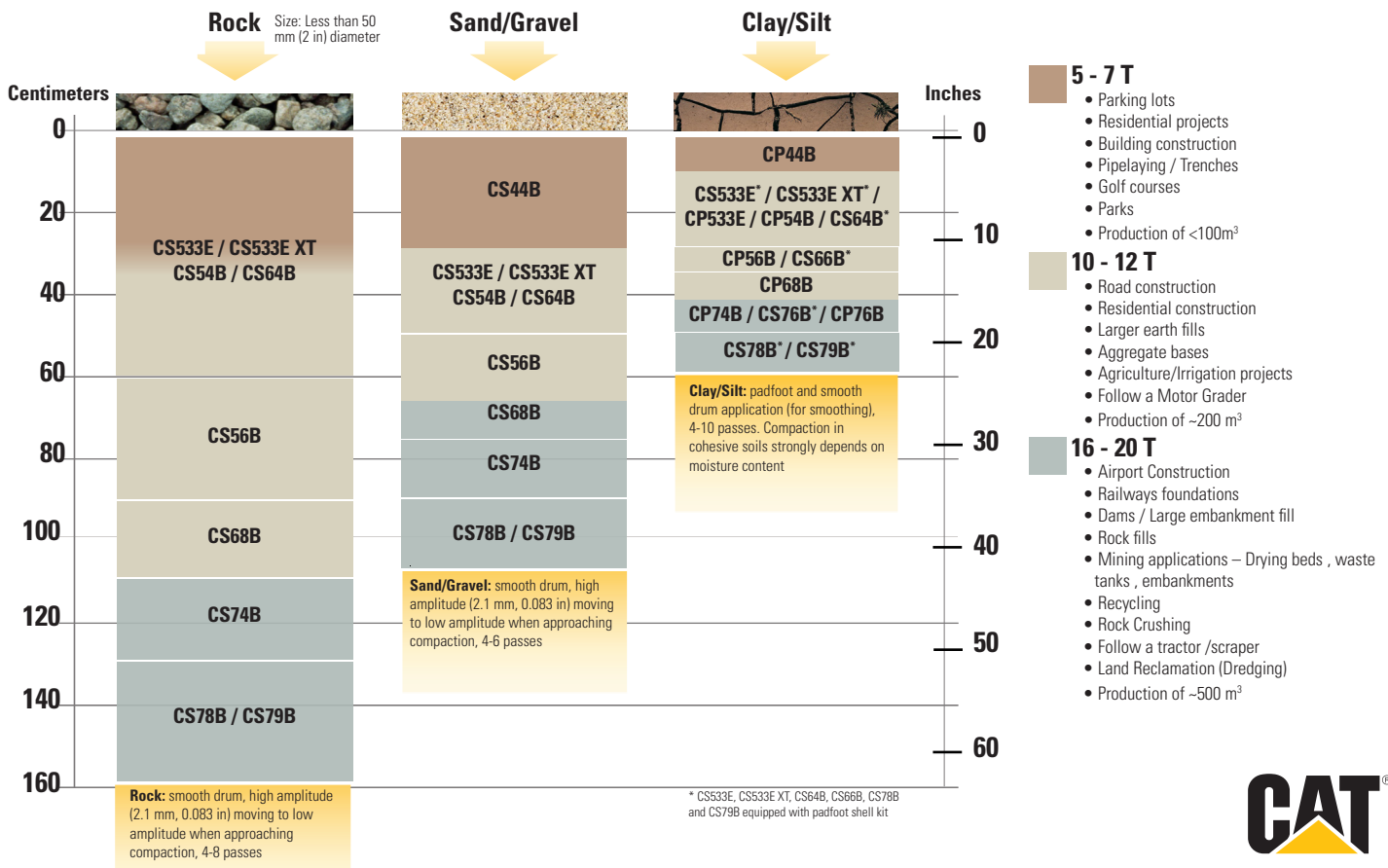
- More weight at the drum and greater amplitude.
- Auto vibrate function makes it easy to ensure consistent, high quality compaction.

Cat Compaction Control

- Helps operator determine when compaction has been completed to specification for greater productivity and uniform compaction quality.
- Accelerometer-based (CMV) and exclusive Machine Drive Power (MDP) measurement technologies available.

VIBRATORY SOIL COMPACTOR SELECTION GUIDE

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



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Technical Specifications

Engine - Power Train

Engine Model	Cat C4.4	
Global Emissions	US EPA Tier 3 EU Stage IIIA	
Gross Power ISO 14396	96.5 kW	129.4 hp
Gross Power SAE J1995	97.1 kW	130.2 hp
Net Power ISO 9249*	85.3 kW	114.4 hp
Net Power SAE J1349*	84.3 kW	113.0 hp
Displacement	4.4 L	268.5 in ³
Stroke	127 mm	5 in
Bore	105 mm	4.1 in
Max. Travel Speed (Forward or Reverse)	11.2 km/h	7 mph
Theoretical Gradeability, no vibration**	55%	

Weights

Operating Weight w/ open platform	9980 kg	22,002 lb
Operating Weight w/ steel sun canopy	10 080 kg	22,223 lb
Operating Weight w/ ROPS/FOPS canopy	10 240 kg	22,575 lb
Operating Weight w/ ROPS/FOPS cab	10 555 kg	23,265 lb
Weight at Drum w/ open platform	5660 kg	12,478 lb
Weight at Drum w/ steel sun canopy	5690 kg	12,544 lb
Weight at Drum w/ ROPS/FOPS canopy	5745 kg	12,666 lb
Weight at Drum w/ ROPS/FOPS cab	5880 kg	12,959 lb

Additional Weight with:

Oval Padfoot Shell Kit	+ 1730 kg	+ 3,814 lb
Square Padfoot Shell Kit	+ 1880 kg	+ 4,145 lb

* Net power advertised is the power available at the engine flywheel when equipped with a fan at maximum speed, air cleaner, and alternator.

** Actual gradeability may vary based on site conditions and machine configuration. Refer to the Operation and Maintenance Manual for more information.

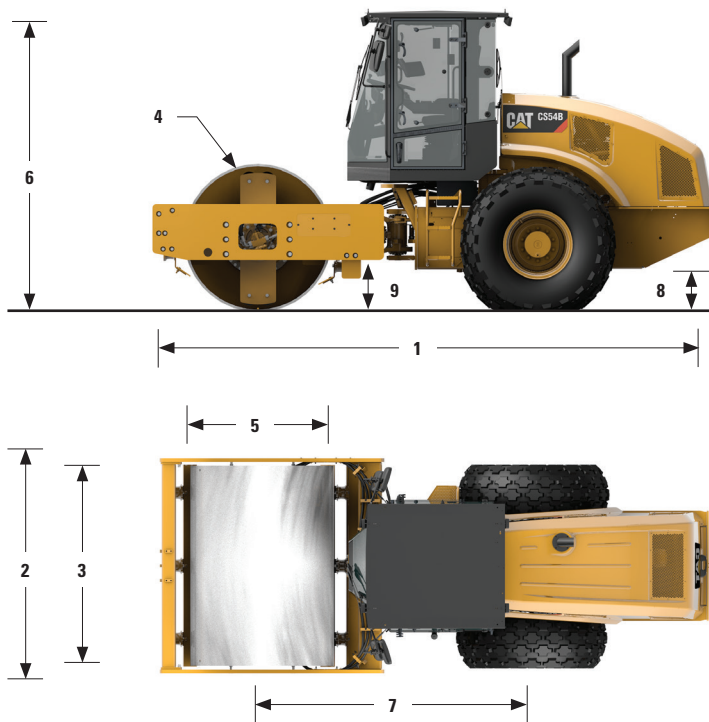
Vibratory System Specifications

Frequency		
Standard	30.5 Hz	1830 vpm
During Eco-mode Operation	27.7 Hz	1664 vpm
Optional Variable Frequency	23.3-30.5 Hz	1400-1830 vpm
Nominal Amplitude @ 30.5 Hz (1830 vpm)		
High	1.9 mm	0.075 in
Low	0.95 mm	0.037 in
Centrifugal Force @ 30.5 Hz (1830 vpm)		
Maximum	234 kN	52,600 lb
Minimum	133 kN	29,900 lb
Static Linear Load		
w/ open platform	26.5 kg/cm	148.5 lbs/in
w/ steel sun canopy	2636 kg/cm	149.3 lbs/in
w/ ROPS/FOPS canopy	26.9 kg/cm	150.8 lbs/in
w/ ROPS/FOPS cab	27.6 kg/cm	154.3 lbs/in

Service Refill Capacities

Fuel Tank, total capacity	242 L	64 gal
Cooling System	25.4 L	6.7 gal
Engine Oil w/ Filter	8.5 L	2.2 gal
Eccentric Weight Housings	26 L	6.9 gal
Axle and Final Drives	18 L	4.8 gal
Hydraulic Tank (service refill)	50 L	13.2 gal

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Dimensions

1	Overall Length	5.85 m	19.21 ft
2	Overall Width	2.30 m	7.53 ft
3	Drum Width	2134 mm	84 in
4	Drum Shell Thickness	25 mm	1 in
5	Drum Diameter	1534 mm	60.4 in
6	Maximum Overall Height	3.11 m	10.2 ft
7	Wheelbase	2.9 m	9.5 ft
8	Ground Clearance	442 mm	17.4 in
9	Curb Clearance	543 mm	21.4 in
	Inside Turning Radius	3.68 m	12.07 ft
	Hitch Articulation Angle	34°	
	Hitch Oscillation Angle	15°	

Optional Padfoot Shell Kit Specifications

	Number of Pads	120	
	Pad Height, oval pads	90 mm	3.5 in
	Pad Face Area, oval pads	63.5 cm ²	9.8 in ²
	Pad Height, optional square pads	90 mm	3.5 in
	Pad Face Area, optional square pads	123 cm ²	19.1 in ²
	Number of Chevrons	16	

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Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
OPERATOR ENVIRONMENT			POWER TRAIN		
Open Platform with Handrails/Guardrails, Floor Mat	✓		Cat C4.4 Diesel Engine	✓	
Vinyl Adjustable Pivoting Seat with Integrated Console and LCD Display	✓		Air Cleaner, Dual Element	✓	
Adjustable Tilting Steering Column with Integrated Cup Holders	✓		Eco-mode	✓	
Rear Vision Camera with Color Touchscreen Display	✓		Dual Propel Pumps; One for Drum Drive, One for Rear Axle	✓	
Seat Belt	✓		Fuel Filter, Water Separator, Priming Pump, Water Indicator	✓	
12-volt Power Outlet	✓		Tilting Radiator/Hydraulic Oil Cooler	✓	
Horn, Backup Alarm	✓		Dual Braking System	✓	
Steel Sun Canopy		✓	Two-speed Hydrostatic Transmission	✓	
ROPS/FOPS Canopy		✓	Transmission Guard		✓
ROPS/FOPS Cab with Climate Control		✓	CAT COMPACTION CONTROL TECHNOLOGY		
Internal Rear View Mirror		✓	Measure - Machine Drive Power and/or CMV		✓
External Rear View Mirrors		✓	Map - SBAS GNSS Mapping		✓
Sun Visor		✓	Connect - Machine to Machine Communication		✓
Cab Internal Roll-down Sun Screen		✓	ELECTRICAL		
VIBRATORY SYSTEM			24 volt Electrical System	✓	
Smooth Drum	✓		75 ampere Alternator	✓	
Dual Amplitude, Single Frequency	✓		750 Cold-cranking Amps Battery Capacity	✓	
Dual Pod-Style Eccentric Weight Housings	✓		OTHER		
Auto-vibe Function	✓		Product Link™	✓	
Front Adjustable Steel Scraper	✓		Sight Gauges for Hydraulic Oil Level and Radiator Coolant Level	✓	
Padfoot Shell Kit (oval or square pads available)		✓	S-O-S SM Sampling Valves: Engine Oil, Hydraulic Oil and Coolant	✓	
Variable Frequency		✓	Upgraded Halogen Light Package		✓
Dual Adjustable Steel Scrapers		✓	Rotating Beacon		✓
Dual Adjustable Polyurethane Scrapers		✓	Fuel Fill Access Door		✓
			Containerized Shipping		✓



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