



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

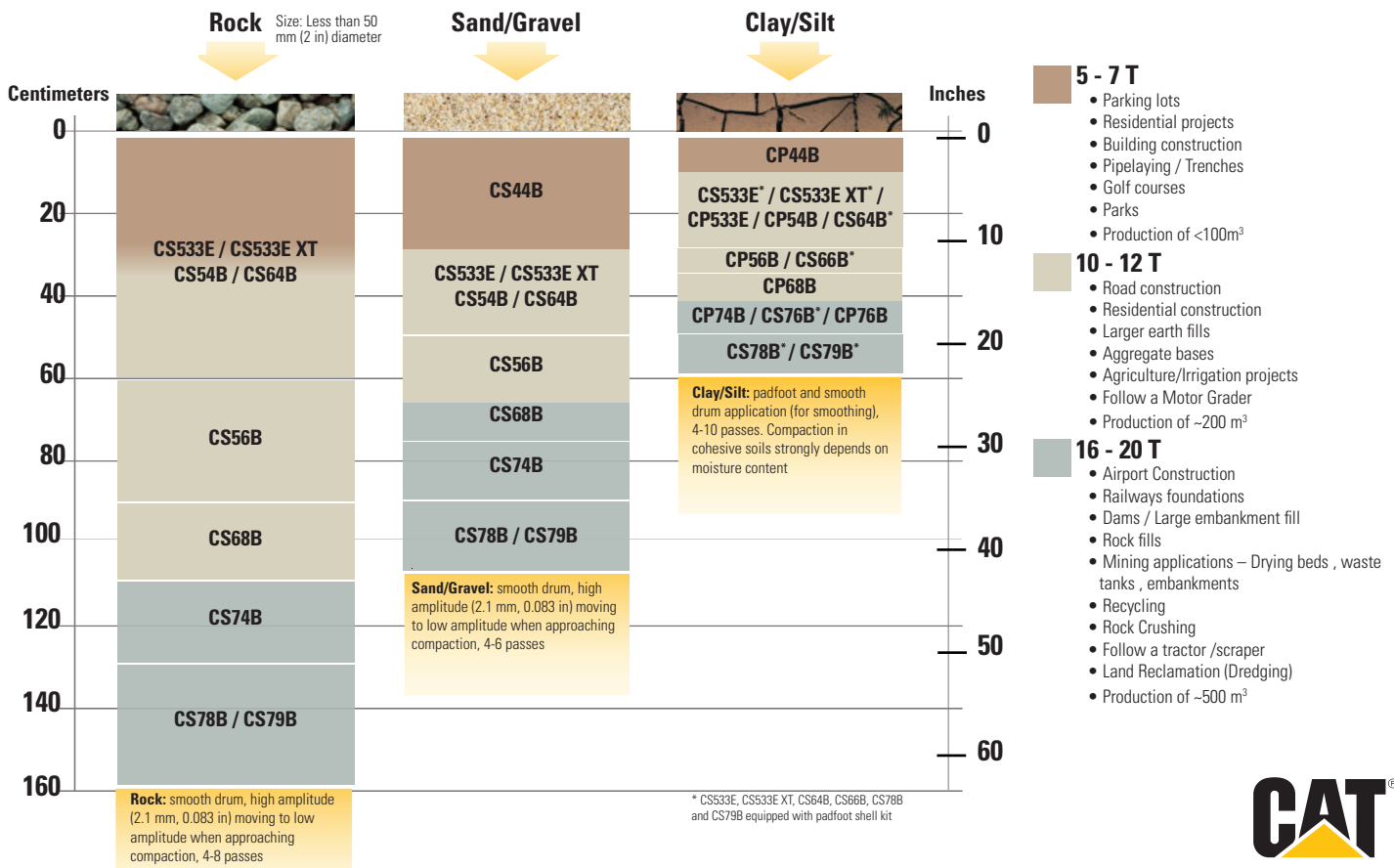
- More weight at the drum and greater amplitude.
- Auto vibrate function makes it easy to ensure consistent, high quality compaction.

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.



Cat® CS54B Vibratory Soil Compactor

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.

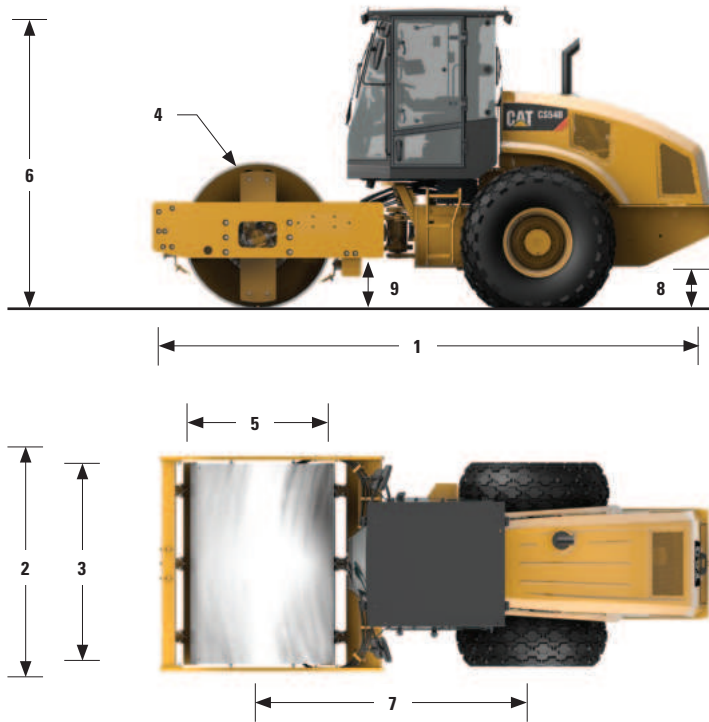
Vibratory System Specifications

| | | |
|--|--------------|---------------|
| 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 |

Cat® CS54B Vibratory Soil Compactor



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 | | ✓ |



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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