CS54
CP54
CS54 XT
Vibratory Soil Compactors

Cat® C4.4 Electronic Diesel Engine with ACERT™ Technology
Gross Power 97 kW/132 hp
Drum Width 2134 mm

Operating Weight (with ROPS/FOPS cab and AC)

<table>
<thead>
<tr>
<th>Model</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS54</td>
<td>10 840 kg</td>
</tr>
<tr>
<td>CP54</td>
<td>11 530 kg</td>
</tr>
<tr>
<td>CS54 XT</td>
<td>12 360 kg</td>
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</table>

Stage IIIA Compliant
Productivity and Reliability in a Durable Package
The durable and reliable CS54, CP54 and CS54 XT Soil Compactors offer high compaction performance, speed and gradeability to maximize productivity while providing exceptional reliability and durability.

**Vibratory System**
Pod-style eccentric weights ensure peak compaction performance and minimal service. High dynamic force helps achieve density in the fewest number of passes. *pg. 4*

**Engine**
✓ **Cat® C4.4 Electronic Diesel Engine with ACERT™ Technology** delivers 97 kW (132 hp) and is built for performance and reliability. *pg. 5*

**Visibility**
The sloped hood design provides exceptional operator visibility to the outside edge of the rear tires and to the rear of the machine. *pg. 6*

✓ New feature
Gradeability and Machine Control
The exclusive dual pump propel system provides a separate balanced hydraulic flow to both the rear drive axle and the front drum drive motor. This unique dual pump propel system provides good grade climbing, machine control and tractive power. Dual pumps also minimize drum and wheel spin-out in low traction conditions. High working speeds increases productivity. pg. 6

Operator’s Station
The CS54, CP54 and CS54 XT Soil Compactors feature excellent operator comfort and visibility. A propel lever wrist rest, grouped control gauges and conveniently located control switches enhance operator productivity and reduce fatigue. Four heavy-duty isolation mounts provide a smooth ride. Standard rearview mirrors, two front-facing and two rear-facing working lights are provided. Machines with the open ROPS/FOPS platform are surrounded by handrails that feature integrated angled foot rests for sure footing when working on a grade. pg. 7

Versatility
Standard dual amplitude expands the compactor’s application range. The large spread between high and low centrifugal force makes it easier to tailor the compactive effort to density specifications. Variable vibration frequency option is now available. pg. 4

The optional padfoot shell kit makes the CS54 an extremely adaptable machine when compacting semi-cohesive or cohesive materials. pg. 8

Serviceability
The fiberglass hood tilts forward to allow access to the engine and daily maintenance points. Daily check points are accessible from ground level. The rear mounted cooling system features a hydraulic oil cooler that tilts down for easier access for cleaning. The operator’s platform tilts forward to provide convenient access to the hydraulic components. Access panels have been added to the steel portion of the engine hood for greater accessability. Vibratory bearing lube service interval of 3 year/3000 hours and no required oil sampling keeps maintenance to a minimum and maximizes production. The engine lubrication change interval is 500 hours. The articulation hitch area features sealed-for-life bearings that effectively eliminate the need for maintenance. Hydraulic system oil change interval is now 2 years/2000 hours. pg. 9

Performance and reliability you can depend on.
Durable, field-proven powertrain and vibratory systems and the world’s largest and most dedicated dealer support system ensure the CS54, CP54 and CS54 XT Soil Compactors will provide maximum utilization.

Comfort and serviceability you deserve.
The operator’s station provides a spacious and comfortable work environment that allows simple and productive operation. Good service access and long service intervals minimize maintenance time and increases productive work time.
Vibratory System
The pod-style vibratory system, proven reliable on previous soil compactors, delivers superior compactive force while offering serviceability advantages.

1 Pod-style Weight Housings
2 Patented Eccentric Weights
3 Heavy-duty Bearings
4 Isolation Mounts

Pod-style weight housings. They are assembled and sealed at the factory to ensure cleanliness, longer bearing life and easier field exchange or service.

Dual amplitude. Dual amplitude works efficiently in a wider range of applications. High or low amplitude is selected from the operator’s station.

Heavy-duty bearings. Large heavy-duty bearings for the eccentric weight shaft designed for high compactive forces.

Variable frequency option. Variable vibratory frequency increases machine versatility.

Service interval. 3 year/3000 hour vibratory bearing lube service interval for reduced maintenance. Scheduled oil sampling is no longer required, reducing maintenance costs and increasing machine uptime.

Isolation mounts. Improved isolation mounts allow more force to be transmitted to the ground and less vibration to the drum yoke.

Patented Eccentric Weights
Reliable dual amplitude selection and innovative design ensure precise performance.

Amplitude selection. Positive amplitude selection is accomplished when the steel shot is repositioned inside the hollow eccentric weight. Direction of weight shaft rotation determines amplitude level.

High reliability. High reliability since there is no chance of the high-strength spherical steel shot wedging together. System reliability is superior to swinging mechanical weights and is also quieter during starts and stops.

Simplified control. Simplified control from the operator’s station with a selection switch on the operator’s console.

Longer service life. No heavy weights to slam together, no metal fragments to contaminate the bearing lubrication system.
Cat® C4.4 Electronic Diesel Engine with ACERT™ Technology

High-tech four cylinder engine provides outstanding durability, performance, reliability and operating economy while producing less emissions.

**ACERT Technology.** This technology combines proven systems with innovative new technologies to precisely shape the combustion process, providing more complete combustion of fuel and lower emissions.

**Cold weather starting.** Improved cold weather starting for maximum reliability.

**Optimum durability and reliability.** More robust block and components improves durability and reliability while producing less noise.

**Low-mounted oil pump.** Low-mounted oil pump for quick start-up-lubrication.

**Large oil cooler.** The large oil cooler reduces oil deterioration and varnishing of internal components. Allows for 500 hour engine oil change intervals.

**Emissions compliant.** The emissions compliant engine meets European EU Stage IIIA emissions control standards.

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Dual Pump Propel System

Superior tractive effort and gradeability for outstanding productivity in demanding applications.

**Dual propel pumps.** Dual propel pumps provide separate, balanced hydraulic flow to the rear wheel axle and the drum drive motors. Provides superior gradeability on steep slopes and increases tractive effort in loose or poor underfoot conditions.

**Limited slip differential.** It provides balanced tractive effort and smooth torque transfer to both rear wheels.

**Speed ranges.** Two speed ranges for versatile operation. Low speed range for vibratory operation and maximum torque when climbing grades. High speed range moves machine quickly over longer distances.

**Valves.** Flushing valves in each propel circuit helps keep hydraulic oil cool and clean for maximum system efficiency.
Gradeability and Machine Control
The exclusive dual pump propel system provides superior performance, machine control and exceptional grade climbing capability.

Propel pump system. The dual propel pump system has dedicated pumps to independently drive the heavy-duty, high-torque rear wheel and drum motors. Should the drum or wheels begin to spin, the non-spinning motor still receives hydraulic flow, allowing continuous tractive effort especially useful in loose underfoot conditions.

Controllability. Controllability gives the operator complete machine control to stop, maintain machine position and change directions while on a slope, especially useful on loose underfoot conditions.

High productivity. Optimum gradeability allows high productivity. Designed for typical applications working on level to moderate grades.

Rear Visibility
The sloped fiberglass hood design provides exceptional operator visibility and good service access.

Visibility. The line of sight to the tire edges and rear of machine is exceptional. Operator can see obstacles measuring 1 meter high located 1 meter to the rear of the machine. Excellent visibility increases productivity when working near obstructions or maneuvering around the job site.

Lockable engine hood. The one-piece lockable engine hood opens quickly and easily with the use of gas struts, providing good access to the engine, cooling system, and all service points.

Sound levels. Low sound levels due to hood design and cooling air flow through the rear mounted radiator, lowering sound levels for the operator and the ground crew.
**ROPS/FOPS Cab**

Optional cab can increase machine utilization and provides greater year-round comfort in extreme environment conditions.

**Cab.** The cab provides a spacious and comfortable work environment that includes large windows, more interior room with storage areas, a cup holder, better ergonomics and low noise levels.

**Visibility.** Unrestricted visibility to the drum and tire edge and to the side and rear of the machine.

**Fully equipped cab.** Items included with cab include two exterior rear view mirrors, two front-facing and two rear-facing working lights, front and rear windshield wipers, slide-open side windows and climate control with heater and defroster, and angled foot rests for sure footing and support when working on a grade. Optional 12-volt outlet for powering personal communication devices.

**Air conditioning option.** The cab can be fitted with air conditioning for increased operator comfort.

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**Open Platform with ROPS/FOPS Canopy**

The platform is equipped with a ROPS/FOPS canopy and is enclosed by handrails and features angled foot rests for sure footing and support when working on a grade.

**Spacious and comfortable working environment.**

All controls, levers, switches and gauges positioned to maximize productivity.

**Visibility.** Unrestricted visibility to the drum and tire edge and to the side and rear of the machine.

**Platform.** The platform is enclosed by handrails and features angled foot rests for sure footing and support when working on a grade.

**Standard equipment.** Standard equipment includes two front-facing and two rear-facing working lights, handrails with angled foot rests, a lockable vandalism guard and a rear view mirror.
Padfoot Drum and Scrapers

Padfoot drums provide superior performance when compacting semi-cohesive or cohesive materials.

**Padfoot drum.** The padfoot drum has 140 pads welded on the drum in a chevron arrangement.

**Pads are tapered to help clean themselves.** New wider design removes more debris for more efficient operation.

**Pads.** Each pad is 127 mm high and has a pad face surface area of 89.4 cm².

**Heavy-duty scraper.** The scraper design features wide, individually adjustable and replaceable scrapers mounted on the front and rear of the drum. Reduces excessive material build-up between the pads.

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Padfoot Shell Kit

Optional padfoot shell kit expands the application range of the CS54 to work in either semi-cohesive or cohesive material.

**Versatility and utilization.** Expands machine versatility and utilization while providing a simple and cost-effective solution for jobs that may require both padfoot and smooth drum compaction.

**Dual-purpose bumper.** The bumper included with the shell kit does not need to be removed. This bumper can also accept the optional leveling blade which increases machine versatility even further. Bumper provides convenient, bolt-on storage for smooth drum scraper plates when they are not being used.

**Scrapers for smooth drum kit.** Scrapers for smooth drum kit are provided. New shell kit scraper design provides better debris-removal performance.

**Padfoot shell halves.** Padfoot shell halves can be quickly and easily installed or removed in about an hour with the use of an approved lifting device.

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1 Improved shell kit scraper design
2 Smooth drum scrapers are stored on the front of the bumper
Reliability and Serviceability

The CS54, CP54 and CS54 XT Soil Compactors provide exceptional reliability and serviceability that you’ve come to expect from Caterpillar.

Indicators. Visual indicators allow easy check of engine coolant, hydraulic oil tank level and air filter restriction.

Operator’s station. The operator’s station tilts forward to allow convenient access to the hydraulic pumps.

Access panels. Added to the steel portion of the hood enhance service access to the engine.

Bearings. Sealed-for-life bearings on the articulation hitch never need to be greased.

Extended service interval. 500 hour engine oil change interval and 3 year/3000 hour vibratory bearing lube service interval reduce maintenance costs and machine downtime. Hydraulic system oil change interval has been increased to 2 years/2000 hours.

Ecology drains. Ecology drains provide an environmentally safer method to drain fluids. Drains are included on the radiator, engine oil pan, hydraulic and fuel tank.

Simple fluid collection. S•O•S\(^\text{TM}\) (Scheduled Oil Sampling) ports allow for simple fluid collection of engine and hydraulic oil.

Hose routing. Secure hose routing with polyethylene mounting blocks reduces rubbing and increases service life.

All-weather connectors. Nylon braided wrap and all-weather connectors ensure electrical system integrity. Electrical wiring is color-coded, numbered and labeled with circuit identifiers to simplify troubleshooting. Fuses are easy to access.

Hydraulic test. Quick connect hydraulic test ports simplify system diagnostics.

Caterpillar batteries. Maintenance-free Cat batteries provide maximum cranking power and protection against vibration. New jump start receptacle design is consistent with all Cat machines.
Caterpillar Product Link System
Simplifies the tracking of equipment fleets to ensure maximum uptime and minimum repair costs.

Product Link. The machine is Product Link wire ready. Product Link streamlines diagnostic efforts, downtime, and maintenance scheduling and costs by providing communication flow of vital machine data and location information between the dealer and the customer. Product Link provides updates on service meter hours, machine condition, and machine location.

Two-way wireless data flow. Communication between on-board machine systems and Cat Dealer/customers.

Product Watch. The Product Watch service option monitors your fleet for unauthorized machine usage. Product Watch can notify the owner via email or a pager if a machine operates outside of a configurable set of parameters.

Your Cat Dealer
Caterpillar backs your machine purchase with the best support system and personnel in the industry.

Caterpillar is the industry service leader. Your machine purchase comes with something the competition cannot offer: a reputation for unmatched, exceptional service and support that comes from years of exceeding customer expectations.

Industry experience. The industry experience of Cat Dealer personnel makes them familiar with the products and services that are valuable to your industry.

Depth. Depth of knowledge gives Cat Dealers an understanding of the machines that is technical and practical. Service personnel can service the entire machine, regardless of how it is configured.

Single source. One location for sales, parts and service creates a relationship with the customer, allowing Caterpillar to understand and meet their unique set of needs.
Engine

Four-stroke cycle, four cylinder Cat C4.4 diesel engine with ACERT Technology. Certified to meet European EU Stage IIIA emissions control standards worldwide.

Ratings at 2200 rpm kW hp
Gross power 97 132
Net Power
EEC 80/1269 91 124
ISO 9249 91 124

Ratings of Caterpillar machine engines are based on standard air conditions of 25°C and 100 kPa dry barometer. Power is based on using 35° API gravity fuel having an LHV of 42 780 kJ/kg when used at 30°C (ref. a fuel density of 838.9 g/L). Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler and alternator. No derating required up to 3000 m altitude.

Dimensions
Bore 105 mm
Stroke 127 mm
Displacement 4.4 liters

Dual-element, dry-type air cleaner with visual restriction indicator, thermal starting aid electric priming pump and fuel/water separator are standard.

Transmission

Two variable displacement piston pumps supply pressurized flow to two dual displacement piston motors. One pump and motor drives the drum propel system while the other pump and motor drives the rear wheels. The dual pump system ensures equal flow to the drive motors regardless of the operating conditions. In case the drum or wheels lose traction, the other motor can still build additional pressure to provide added torque.

The drive motors have two swashplate positions allowing operation at either maximum torque for compaction and gradeability or greater speed for moving around the job site. A rocker switch at the operator’s console triggers an electric over hydraulic control to change speed ranges.

Max. speeds (forward and reverse)
Smooth Drum
Low Range 5.8 km/h
High Range 11.1 km/h

Final Drives and Axle

Final drive is hydrostatic with planetary gear reducer to the drum and hydrostatic with differential and planetary gear reduction to each wheel.

Axle
Heavy-duty fixed rear axle with a limited slip differential for smooth and quiet torque transfer.

Tires
Smooth and Padfoot Drum
587 mm x 660 mm (23.1” x 26”)

Operator and Machine Protective Equipment

Forward Roll Over Protective Structure/Falling Object Protective Structure (ROPS/FOPS) canopy is a two-post structure that bolts directly onto flanges welded to the operator platform. The structure meets SAE J1040 May94, SAE J231 Jan81, ISO 3449-1992 and ISO 3471-1994. This structure may be an option in some areas and standard in others. Consult your dealer for specifics.

Backup Alarm. 107 dB(A) alarm sounds whenever the machine is in reverse.

Forward Warning Horn. Located on the front of machine to alert ground personnel.

Seat Belt. 76 mm wide seat belt is standard.

Steering

A priority-demand hydraulic power-assist steering system provides smooth low-effort steering. The system always receives the power it needs regardless of other hydraulic functions.

Minimum turning radius:
Inside 3680 mm
Outside 5810 mm

Steering angle
(each direction) ± 34°

Oscillation angle
(each direction) ± 15°

Hydraulic system
Two 76 mm bore, double-acting cylinders powered by a gear-type pump.
**Frame**

Fabricated from heavy gauge steel plate and rolled sections and joined to the drum yoke at the articulation pivot. Articulation area is structurally reinforced and joined by hardened steel pins. One vertical pin provides a steering angle of \( \pm 34^\circ \) and a horizontal pin allows frame oscillation of \( \pm 15^\circ \). The articulation lock prevents machine articulation when placed in the locked position. Sealed-for-life hitch bearings require no maintenance. Frame also includes tie-down points for transport.

**Electrical**

The 24-volt electrical system consists of two maintenance-free Cat batteries, electrical wiring is color-coded, numbered, wrapped in vinyl-coated nylon braid and labeled with circuit identifiers. The starting system provides 750 cold cranking amps (cca). The system includes an 55 alternator.

**Instrumentation**

Electronic Control Module (ECM) constantly monitors condition of the engine, and alerts the operator of problems with three levels of warning. Warning system includes: Action Alarm and Lamp, Low Engine Oil Pressure, High Engine Coolant Temperature, High Hydraulic Oil Temperature, Low Charge Pressure, Starting Aid and High Combustion Air Temperature. Instrumentation also includes an Alternator Malfunction Light, Check Engine/Electrical Fault, Service Hour Meter and Fuel Gauge.

**Service Refill Capacities**

<table>
<thead>
<tr>
<th>Service Refill Capacities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Liters</strong></td>
</tr>
<tr>
<td>Fuel tank</td>
</tr>
<tr>
<td>Full fuel capacity</td>
</tr>
<tr>
<td>Cooling system</td>
</tr>
<tr>
<td>Engine oil with filter</td>
</tr>
<tr>
<td>Eccentric weight housings</td>
</tr>
<tr>
<td>Axle and final drives</td>
</tr>
<tr>
<td>Hydraulic tank</td>
</tr>
</tbody>
</table>

**Brakes**

**Service brake features**

Closed-loop hydrostatic drive system provides dynamic braking during operation.

**Secondary brake features**

Spring-applied/hydraulically-released multiple disc type brake mounted on the drum drive gear reducer. Secondary brakes are activated by: a button on the operator’s console; loss of hydraulic pressure in the brake circuit; or when the engine is shut down. A brake interlock system helps prevent driving through the secondary brake.

* All machines sold within European Union are equipped with a brake release pump which allows the manual release of the secondary brake system for towing the machine.

Braking system meets EN 500.

**Vibratory System**

<table>
<thead>
<tr>
<th>CS54</th>
<th>CS54 XT</th>
<th>CP54</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequency</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High amplitude</td>
<td>31 Hz</td>
<td>31 Hz</td>
</tr>
<tr>
<td>Low amplitude</td>
<td>34 Hz</td>
<td>34 Hz</td>
</tr>
<tr>
<td>Optional variable frequency</td>
<td>23.3 - 31 Hz</td>
<td>23.3 - 31 Hz</td>
</tr>
<tr>
<td><strong>Nominal Amplitude</strong></td>
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</tr>
<tr>
<td>High</td>
<td>1.8 mm</td>
<td>1.8 mm</td>
</tr>
<tr>
<td>Low</td>
<td>0.85 mm</td>
<td>0.85 mm</td>
</tr>
<tr>
<td><strong>Centrifugal Force</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>234 kN</td>
<td>234 kN</td>
</tr>
<tr>
<td>Minimum</td>
<td>133 kN</td>
<td>133 kN</td>
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Operating Weights
Weights shown are approximate and include lubricants, coolant, full fuel and hydraulic tanks and a 80 kg operator.

### Machine Weights

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<tbody>
<tr>
<td>with open platform</td>
<td>10 265</td>
<td>11 760</td>
<td>11 100</td>
</tr>
<tr>
<td>equipped with padfoot shell kit</td>
<td>11 690</td>
<td>13 185</td>
<td>—</td>
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<tr>
<td>with ROPS/FOPS cab &amp; AC</td>
<td>10 840</td>
<td>12 360</td>
<td>11 530</td>
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<tr>
<td>equipped with padfoot shell kit</td>
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<td>13 785</td>
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### Weight at Drum

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<td>6780</td>
<td>6180</td>
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<td>equipped with padfoot shell kit</td>
<td>6935</td>
<td>8205</td>
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<td>7030</td>
<td>6300</td>
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<tr>
<td>equipped with padfoot shell kit</td>
<td>7185</td>
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### Static Linear Load- kg per linear cm

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<tbody>
<tr>
<td>with ROPS/FOPS cab &amp; AC</td>
<td>27 kg/cm(1)</td>
<td>32.9 kg/cm(2)</td>
<td>—</td>
</tr>
</tbody>
</table>

(1) Meets NFP 98736 class: VM2
(2) Meets NFP 98736 class: VM3

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### Dimensions

All dimensions are approximate.

---

**A** Overall length

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<thead>
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<th>CS54 XT</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>5570</td>
<td>5580</td>
<td>5570</td>
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</table>

**B** Overall width

<table>
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<tbody>
<tr>
<td></td>
<td>2300</td>
<td>2360</td>
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</table>

**C** Drum width

<table>
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</thead>
<tbody>
<tr>
<td></td>
<td>2134</td>
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</table>

**D** Drum shell thickness

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<tr>
<td></td>
<td>25</td>
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</table>

**E** Drum diameter

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<tbody>
<tr>
<td></td>
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<td>1534</td>
<td>1295</td>
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**F** Height at ROPS/FOPS canopy

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<th>CS54 XT</th>
<th>CP54</th>
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<tbody>
<tr>
<td></td>
<td>3070</td>
<td>3070</td>
<td>3070</td>
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</tbody>
</table>

**G** Height at ROPS/FOPS cab

<table>
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<th>CS54 XT</th>
<th>CP54</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>3070</td>
<td>3070</td>
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</table>

**H** Wheelbase

<table>
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<tr>
<td></td>
<td>2900</td>
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**I** Ground clearance

<table>
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<tr>
<td></td>
<td>516</td>
<td>495</td>
<td>524</td>
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**J** Curb clearance

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<th>CP54</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>516</td>
<td>495</td>
<td>524</td>
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</table>

Inside turning radius

<table>
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<th>CS54 XT</th>
<th>CP54</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>3680</td>
<td>3680</td>
<td>3680</td>
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Outside turning radius

<table>
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<th>CS54 XT</th>
<th>CP54</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>5810</td>
<td>5810</td>
<td>5810</td>
</tr>
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</table>
Optional Equipment

Optional equipment may vary. Consult your Cat dealer for specifics.


ROPS/FOPS Cab. Includes a cloth suspension seat, one access door, tinted safety glass windows, electric wipers front and rear, heater/defroster, two vertically sliding side windows for ventilation, rear view mirrors, two front-facing and two rear-facing working lights, interior dome light, and coat hook. New foot rests have been added to the floor of the cab for sure footing and greater operator comfort. More rear glass has been added to provide even greater rear visibility to the operator. The cab is now pre-wired for the addition of a radio set (radio not included). A 12 volt outlet is standard in some markets, available as an option in others. Other options include cab lift cylinder, air conditioning, sun visor, roll-down sun screen and internal rear view mirrors. Cab is fully EROPS rated and meets ISO 3449-1992 and ISO 3471-1994.

Two-Piece Padfoot Shell Kit. Bolts onto the smooth drum CS54. Features 90 mm high pads. Includes heavy-duty scraper teeth and a special bumper that provides a secure area to store smooth drum scraper plates when not in use. Each shell half weighs 810 kg.

Transmission Guard. Consists of a heavy plate which covers the rear axle, axle drive motor and input gearbox.

Smooth Drum Rear Steel Scraper. Mounted at the rear of the drum.

Flexible Drum Scrapers. Designed for use with smooth drum models. Mounted at the front and rear of drum. They are made of polyurethane and are designed to contact the drum, cleaning debris from the drum surface.

Vibration Auto On/Off. Vibration system switches on/off automatically.

Variable Frequency. Allows the operator to vary drum frequency.

VPM Gauge. Mounted on the console, this gauge displays the actual vibratory system frequency.

Speedometer Recording Module. Provides a visual gauge for reading worktime, machine speed, distance covered and amplitude selection.

Compaction Indicator A30 RMV. Includes compaction meter value gauge and RMV indicator.

Compaction Indicator with Analog Display. Includes Volkel Analog Compaction Display (ACD) compaction meter.

Operator Platform Lift Cylinder. Features a hydraulic cylinder to raise and lower the operator’s platform for easier access to the hydraulic pumps.

Rotating Beacon. Includes an amber beacon and mount that can be attached to machines with ROPS/FOPS canopy or ROPS/FOPS cab.

Rotating Seat. Provides 20 degrees of pivot adjustment for greater operator comfort.

Bio Hydraulic Oil Ready. Hydraulic system is designed and tested for use with Cat BIO HYDO™ HEES hydraulic fluid and is available as a factory fill.

12-Volt Outlet. Allows operator to plug in portable communication devices.
Estimated Production (CS54)

<table>
<thead>
<tr>
<th>Depth mm</th>
<th>Density %</th>
<th>150/300 mm Layers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface</td>
<td>0-500</td>
<td>&gt;98 190/380 m³/h</td>
</tr>
<tr>
<td>Shallow</td>
<td>500-3000</td>
<td>95-98 345/610 m³/h</td>
</tr>
<tr>
<td>Deep</td>
<td>&gt;3000</td>
<td>90-95 610/1150 m³/h</td>
</tr>
</tbody>
</table>

Based on depth of fill below final grade (surface)
Based on final compacted thickness of layer
Density spec. is based on Standard Proctor Test

Productivity Comparisons

- % Compaction of Standard Proctor
- 150 mm Crushed Limestone Base
- Results are similar for padfoot drum.
- Results may vary for different applications.

Machine Selection

<table>
<thead>
<tr>
<th>Application</th>
<th>Layer Thickness mm</th>
<th>Smooth Drum</th>
<th>Padfoot Drum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand, Clayey or Silty Sand, Mine Tailing</td>
<td>150-300 300-450</td>
<td>●</td>
<td>▲</td>
</tr>
<tr>
<td>Clay, Sandy or Silty Clay, Stabilized Clay</td>
<td>150-300 300-450</td>
<td>▲</td>
<td>●</td>
</tr>
<tr>
<td>Silt, Sandy or Clayey Silt, Coal, Ash, Solid Waste</td>
<td>150-300 300-450</td>
<td>▲</td>
<td>▲</td>
</tr>
<tr>
<td>Base Aggregate, Gravel, Crushed Rock, Stabilized Base</td>
<td>150-300 300-450</td>
<td>▲</td>
<td>▲</td>
</tr>
</tbody>
</table>

- Good
- Better
- Best

Shell Kit Performance

<table>
<thead>
<tr>
<th>Padfoot Drum</th>
<th>Shell Kit</th>
<th>Shell Kit Performance</th>
<th>Performance Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Pads 140</td>
<td>120</td>
<td>Less Kneading better for silt</td>
<td>Heavy Clay ● □</td>
</tr>
<tr>
<td>Pad Height      127 mm</td>
<td>90 mm</td>
<td>Less Penetration better for silt and sandy clay</td>
<td>Sandy Clay □ ●</td>
</tr>
<tr>
<td>Weight at Drum  6240 kg</td>
<td>5570 kg</td>
<td>Higher Ground Pressure better for sandy clay</td>
<td>Silt with Clay □ ●</td>
</tr>
<tr>
<td>Max. Amplitude  1.7 mm</td>
<td>1.2 mm</td>
<td>Smaller Drum Movement better for silt and clay</td>
<td>Slopes/Trenches ● □</td>
</tr>
</tbody>
</table>

The CS54 and CP54 vibratory soil compactors provide high compaction performance. Ideal for medium to large construction projects with low to moderate grades.