

**CS56/CP56
CS64/CP64
CS74/CP74**
Vibratory Soil
Compactors



Cat® C6.6 Electronic Diesel Engine with ACERT™ Technology

| | |
|-------------|---------------|
| Gross Power | 116 kW/158 hp |
| Drum Width | 2134 mm |

Stage IIIA Compliant

Operating Weight (with ROPS/FOPS cab and AC)

| | |
|------|-----------|
| CS56 | 12 500 kg |
| CP56 | 12 450 kg |
| CS64 | 14 470 kg |
| CP64 | 14 545 kg |
| CS74 | 15 685 kg |
| CP74 | 15 565 kg |

Productivity and Reliability in a Durable Package

The durable and reliable CS/CP56, CS/CP64, and CS/CP74 Soil Compactors offer high compaction performance, speed and gradeability to maximize productivity.

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. *Amplitude has been increased on the CS/CP56 and CS/CP64, providing more compaction force.* **pg. 4**

Operator's Station

The operator's station features excellent comfort and visibility. A tilting steering column, 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 smoother ride. Standard rearview mirrors and two front-facing/two rear-facing working lights are provided. Steering wheel with integrated center horn function and steering knob helps reduce operator fatigue. Machines with the open ROPS/FOPS platform are surrounded by hand rails and feature angled foot rests for sure footing when working on a grade. **pg. 7**

Engine

✓ *Cat® C6.6 Electronic Diesel Engine with ACERT™ Technology* delivers 116 kW (158 hp) and is built for performance and reliability. The engine design and components are more robust, providing more reliability, less noise and more durability. **pg. 5**

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 excellent grade climbing, machine control and tractive power for effective use of the leveling blade option. Dual pumps also minimize drum and wheel spin-out in low traction conditions. High working speeds increases productivity. **pg. 6**



✓ *New feature*

Serviceability

- ✓ *The one-piece fiberglass hood has a new chamfered design. It tilts open to allow access to the engine and daily maintenance points. Two sets of lift cylinders make the hood easy to open. All check points are accessible from the right side of the machine at ground level. Rear mounted cooling system allows easy access for cleaning. The hydraulic oil cooler tilts down for convenient access and easy cleaning. The operator's platform tilts forward to provide convenient access to the hydraulic components. Vibratory bearing lube service interval of 3 year/3000 hours keeps maintenance to a minimum and maximizes production.*
- ✓ *No vibratory system scheduled oil sampling means less vibration system maintenance. The articulation hitch features sealed-for-life bearings that never need maintenance.*
- ✓ *Hydraulic system oil change interval is now 2 years/2000 hours. **pg. 12***

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. **pg. 4**

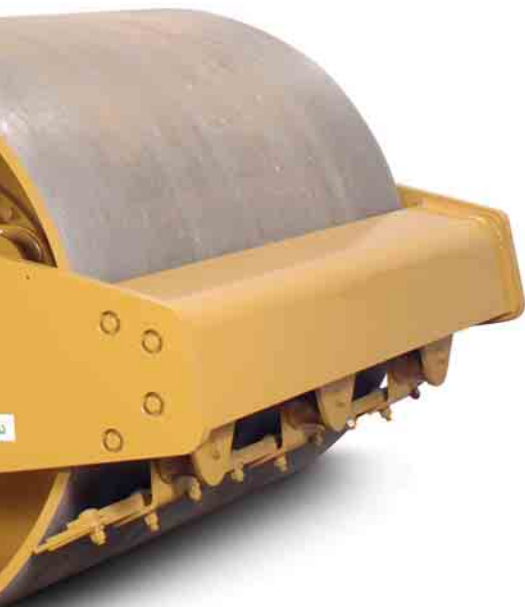
The high traction propel system means the machine can go more places and push more material with the optional foot-controlled leveling blade. The optional padfoot shell kit enhances the versatility of the machines when compacting cohesive or semi-cohesive materials. **pg. 9**

Intelligent Compaction Capabilities with AccuGrade™ Compaction GPS Mapping and Measurement for Soil Compactors

- ✓ *AccuGrade Compaction increases productivity and ensures that production meets specifications by eliminating guesswork. AccuGrade Compaction documents the compaction results for use in Quality Control / Quality Assurance applications. **pg. 10-11***

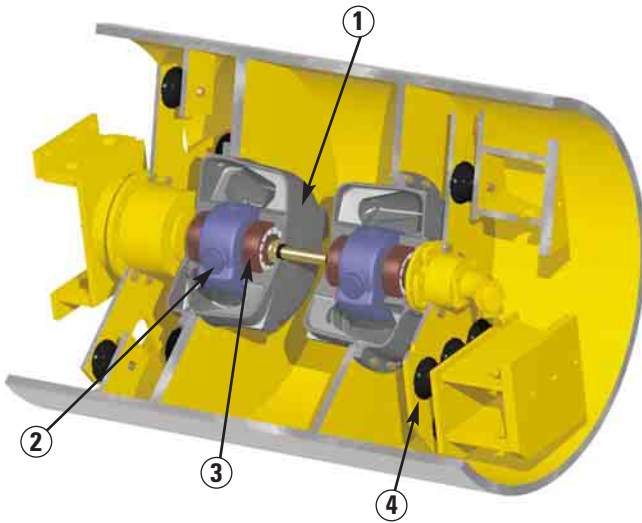
Visibility

- ✓ *The one-piece sloped hood design, narrower rear fenders, and more cab glass to the rear provide exceptional operator visibility to the outside edge of the rear tires and to the rear of the machine. **pg. 6***



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.

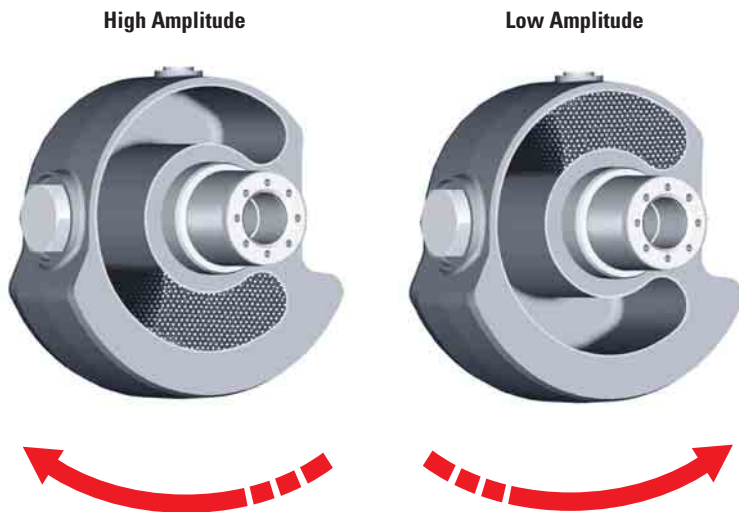
Vibratory frequency. Vibratory frequency of 30 Hz for high compaction results. Optional variable frequency control available with a frequency range from 23.3-30 Hz allows frequency to be better matched to varying job conditions.

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

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.

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® C6.6 Electronic Diesel Engine with ACERT™ Technology

Industry-proven Caterpillar technology designed to provide unmatched performance, reliability and fuel economy with ample power for the most demanding jobs.



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.

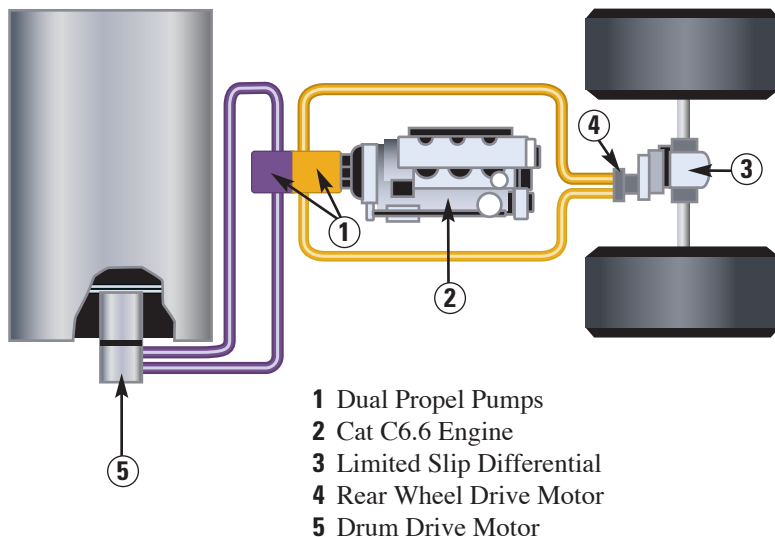
Low-mounted oil pump. Low-mounted oil pump for quick start-up-lubrication.

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.

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, proven 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 loss of traction to either motor occur, there is always hydraulic flow to the non-spinning motor, allowing continuous tractive effort.

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.

Pressure valve. The pressure override (POR) valve limits maximum system pressure by de-stroking the propel pumps. This reduces pump flow while maintaining system pressure. This lowers the horsepower draw while accelerating the machine which saves fuel.

Rear Visibility

The one-piece sloped fiberglass hood design provides exceptional operator visibility and excellent 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. Fenders have been narrowed, as has the rear bumper. 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 two sets of gas struts, providing unrestricted access to the engine, cooling system, and all service points.

Sound levels. Low sound levels due to hood design and improved 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.



Spacious and comfortable environment. Large windows with more glass added to the rear of cab provide exceptional visibility. Generous interior space with storage areas, excellent ergonomics, and low sound levels.

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. New foot rests added to the floor of the cab provide sure footing and greater operator comfort. The cab is now pre-wired for the addition of a radio set (radio not included). A 12-volt outlet has been added for powering personal communication devices.

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

ROPS/FOPS Canopy

Ergonomic design promotes maximum operator productivity while offering excellent visibility and unmatched comfort.



Standard equipment. Includes two front-facing and two rear-facing working lights, hand rails with angled foot rests, a lockable vandalism guard and a rear view mirror.

Reduced vibration. Four heavy-duty rubber mounts and a floor mat reduce vibrations to the operator.

Tilting steering column. Steering console angle is infinitely adjustable for maximum comfort. Tilt capability provides easy entrance and exit for the operator.

Maximum comfort. Comfortable and durable vinyl seat is adjustable with flip-up arm rests and a 76 mm wide retractable seat belt. Optional rotating seat available.

Excellent visibility. Handrails and ROPS/FOPS do not interfere with line of sight to drum edge and rear tire.

Optimized Cooling Air Flow

Improved air flow design minimizes dust clouds and eliminates hot air discharge on operator.



Optimized air flow. Pulls cool air from the middle of the hood and discharges hot air out the rear.

Operator comfort. Hot air directed away from operator prevents hot air from blowing on operator, improving operator comfort and productivity

Improved operator visibility. Minimized dust clouds because discharged air is not directed towards ground and does not contribute to the production of dust clouds.

Padfoot Drum and Scrapers

Padfoot drums provide superior performance when compacting clays. Heavy-duty scrapers break materials away from the drum surface to allow for deep penetration of the padfeet.



Padfoot drum machine shown with standard round pad design and optional leveling blade.

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

Maximum compaction. Standard round pad is 127 mm high with a pad face surface area of 89.4 cm² for high ground contact pressure and maximum compaction. Tapered, self-cleaning design allows pads to walk out of the lift without fluffing or “kicking up” the soil around the pads.

High ground contact pressure. Optional square pad is 100 mm high with a pad face surface area of 140 cm². The shorter pad height and larger surface area provides high ground contact pressure. The square pads and drum also produce a sealed surface finish that prevents moisture from penetrating.

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.

Optional square pad design

Leveling Blade

Optional leveling blade increases machine versatility and utilization, plus greatly enhances productivity.



Machine versatility and utilization. Suitable for many applications like material knockdown, site leveling, trench backfilling and light dozing.

Blade control. Easy to use leveling blade is controlled by operator's right foot to provide simple operation of machine propel, steering, and blade functions simultaneously.

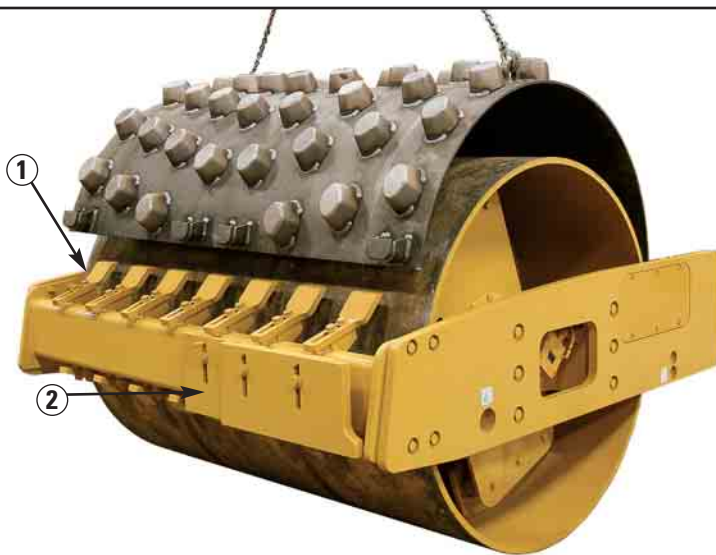
Improved performance. Improved lift cylinder performance increases blade speed for greater productivity and efficiency.

Cutting edges. Two-piece reversible and replaceable cutting edges increase edge service life and reduce replacement costs.

Blade. No special permits for transporting with a blade width of 2500 mm.

Padfoot Shell Kit

Optional padfoot shell kit enhances machine versatility and productivity, allowing it to work in either cohesive or semi-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.

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

AccuGrade™ Compaction for Soil Compactors

AccuGrade Compaction GPS Mapping and Measurement for Soil Compactors turns your operator into a soil compaction expert.



GPS Mapping and Measurement. Senses soil compaction as it works and correlates the data with the GPS position of the measurement. These capabilities improve work quality while lowering owning and operating costs, reducing necessary manpower, and optimizing productivity.

Drum-mounted accelerometer. Measures drum movement to sense compaction levels of the soil.

Controller package. Converts accelerometer measurements to Caterpillar Compaction Values (CCVs), which provide indications of soil stiffness to the operator.

GPS receiver. Determines the 3-dimensional position of the soil compactor drum by triangulation between several satellites. The unit houses the receiver and a GPS antenna all in one unit, so there is only one fixture to deploy.

Angle sensor. Mounts to the base of the mast. The instrument measures the left/right tilt of the drum to a range of $\pm 45^\circ$. This information is sent to the display unit's processor to provide greater positional accuracy.

Radio. Mounted on the cab of the machine to ensure maximum signal reception. The radio receives real-time Compact Measurement Record (CMR) data from the GPS base station radio for calculating high-accuracy GPS positions. Radio broadcast frequencies work in all weather conditions. The radio can also provide a two-way wireless radio network between the machine and a site office computer running AccuGrade Office software. Compaction data from the display unit can be transferred to the job site computer for data analysis.

CD700 Graphic LCD display unit. Rugged and waterproof CD700 display consolidates position, compaction, and operational data in a single, intuitive interface located at the operator's fingertips. It also houses a powerful processor. The display collects data from the GPS receiver, the angle sensor, and the compaction measurement system. It converts the data into values, displays the values to the operator, and saves the values on removable storage media.

Mast. Designed to position the GPS receiver over the center of the drum. The mast deploys hydraulically with a hand pump. When not in use, the mast folds into a secure storage position, making ground-level removal of the receiver easy. The mast includes all electrical wiring and harnesses.

AccuGrade Compaction Provides Efficiency, Productivity, and Cost Benefits

The system will benefit the owner, the operator, and the project owner.



The display provides the operator with compaction data as it is measured.



Navigation through the display menu is easy and intuitive, allowing the operator to change the display parameters on the go.

More productive operator. System provides operators with real-time information about the status of the work, helping them determine if the soil has reached its target stiffness. This eliminates guesswork and tells the operator when to move on to a new area to work, minimizing the number of passes.

Backlit screen and GPS mapping capability makes operation possible in low-light conditions, extending workday.

Better quality compaction. The operator can use the data to determine when the moisture level of the soil is not ideal, and lead soil remediation efforts by directing the water truck or excavator.

GPS mapping capabilities help the operator ensure that the entire area has been covered, and provides job documentation that correlates compaction values on a one-to-one basis for Quality Control/Quality Assurance use.

The data helps the operator identify soft spots or buried objects.

Mapping can alert the operator to inaccuracies in grade elevation before the problem becomes a more expensive fix. The mapping capabilities can also help the operator work in low light conditions, increasing the productive time of a work day.

Lower owning and operating costs. The system will speed up the pace of the job by helping the operator determine when to move on, and lower fuel consumption by eliminating unnecessary passes.

The system provides documentation that compaction specifications have been met on a one-to-one basis, reducing the need for costly and time consuming testing. AccuGrade Compaction can eliminate the need for proof rollers on certain jobs.

The system will also help eliminate costly rework by alerting the operator to potential problems early in the construction process, when they are easier and less costly to remedy.

Contractors can realize bonus awards for early work completion and quality.

Benefits for your customer. AccuGrade Compaction provides job site efficiencies that reduce overall project costs due to faster completion.

The system provides project owners with a complete, one-to-one historical documentation of the number of passes and stiffness values, helping to ensure the quality of the project.

High quality of the project increases the life cycle of the finished road and lowers maintenance costs that arise from poor construction.

Reliability and Serviceability

CS/CP56, CS/CP64, and CS/CP74 Soil Compactors continue to provide the exceptional reliability and serviceability that you've come to expect from Caterpillar.



The one-piece fiberglass hood tilts forward for exceptional access to the engine and cooling system. Daily service points are accessible from ground level and are grouped on one side of the machine.

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.

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

Simple fluid collection. S•O•SSM (Scheduled Oil Sampling) ports allow for simple fluid collection of engine and hydraulic oil.

Vibratory pods sampling not required. Vibratory pods do not require scheduled oil sampling, reducing maintenance.

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

Cat batteries. Maintenance-free Cat batteries provide maximum cranking power and protection against vibration. New jump start receptacle design is consistent with all Cat machines.

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

Right side service access. All major systems are serviced from the same side of the machine for greater convenience.

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

Cooling system. The rear mounted cooling system provides easy access for cleaning. Hydraulic oil cooler tilts rearward for additional access to the radiator.

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.

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.

Caterpillar Product Link System

Simplifies the tracking of equipment fleets to ensure maximum uptime and minimum repair costs.



- Product Link**
 - machine hours
 - machine diagnostics
 - machine location



- Product Watch (optional)**
 - monitors your fleet for unauthorized machine usage
 - notifies you by email or pager

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.

Product Link is not standard equipment in all markets. Consult your local Cat Dealer for details.

Your Cat Dealer

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



Cat 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, six cylinder Cat C6.6 electronic diesel engine with ACERT Technology. Certified to meet the current model year emissions regulations under the provisions of 97/68/EC Stage IIIA.

| Ratings at 2200 rpm | kW | hp |
|----------------------------|-----|-----|
| Gross power | 116 | 158 |
| Net Power | | |
| EEC 80/1269 | 108 | 147 |
| ISO 9249 | 108 | 147 |

All engine horsepowers are metric including front cover.

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 | 6.6 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 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.

Speeds (forward and reverse)

| | |
|--------------|-----------|
| Smooth Drum | |
| Low Range | 5.7 km/h |
| High Range | 11.4 km/h |
| Padfoot Drum | |
| Low Range | 5.7 km/h |
| High Range | 11.4 km/h |

Final Drives and Axle

Final drive is hydrostatic with 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 (CS/CP56) or four-post (CS/CP64, 74) 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.

Instrumentation

Electronic Control Module (ECM) constantly monitors condition of the engine, and alerts the operator if a problem does occur 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.

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 80-amp alternator.

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 $\pm 15^\circ$. Safety lock prevents machine articulation when placed in the locked position. Sealed-for-life hitch bearings never need maintenance. Frame also includes tie-down points for transport.

Service Refill Capacities

| | Liters |
|---------------------------|--------|
| Fuel tank | 300 |
| Full fuel capacity | 345 |
| Cooling system | 22.8 |
| Engine oil with filter | 17.4 |
| Eccentric weight housings | 26 |
| Axle and final drives | 18 |
| Hydraulic tank | 90 |

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

| | Smooth Drums | Padfoot Drums |
|------------------------------|----------------|----------------|
| Frequency | | |
| Standard, 56 and 64 | 31.9 Hz | 31.9 Hz |
| Optional, 56 and 64 | 23.3 - 31.9 Hz | 23.3 - 31.9 Hz |
| Standard, 74 only | 30 Hz | 30 Hz |
| Optional, 74 only | 23.3 - 30 Hz | 23.3 - 30 Hz |
| Nominal Amplitude | | |
| High | 1.8 mm | 1.8 mm |
| Low | 0.9 mm | 0.9 mm |
| Centrifugal Force at 31.9 Hz | | |
| Maximum, 56 and 64 | 282 kN | 282 kN |
| Minimum, 56 and 64 | 141 kN | 141 kN |
| Centrifugal Force at 30 Hz | | |
| Maximum, 74 only | 332 kN | 332 kN |
| Minimum, 74 only | 166 kN | 166 kN |

Operating Weights

Weights shown are approximate and include lubricants, coolant, full fuel and hydraulic tanks and a 80 kg operator.

| Machine Weights | kg | kg | kg |
|-----------------------------------|-------------|-------------|-------------|
| | CS56 | CS64 | CS74 |
| with open platform | 11 965 | 13 930 | 15 145 |
| equipped with leveling blade | 12 268 | 13 964 | 15 110 |
| equipped with padfoot shell kit | 13 292 | 14 700 | 15 918 |
| equipped with blade and shell kit | 13 928 | 15 364 | 16 581 |
| with ROPS/FOPS cab & AC | 12 500 | 14 470 | 15 685 |
| equipped with leveling blade | 12 810 | 14 504 | 15 651 |
| equipped with padfoot shell kit | 13 834 | 15 241 | 16 458 |
| equipped with blade and shell kit | 14 493 | 15 904 | 17 121 |

Weight at Drum

| | | | |
|-----------------------------------|------|--------|--------|
| with open platform | 6561 | 8841 | 10 010 |
| equipped with leveling blade | 6934 | 8945 | 10 025 |
| equipped with padfoot shell kit | 7802 | 9350 | 10 519 |
| equipped with blade and shell kit | 8680 | 10 285 | 11 454 |
| with ROPS/FOPS cab & AC | 6702 | 8981 | 10 150 |
| equipped with leveling blade | 7163 | 9086 | 10 166 |
| equipped with padfoot shell kit | 7944 | 9491 | 10 660 |
| equipped with blade and shell kit | 8872 | 10 426 | 11 595 |

Machine Weights

| | CP56 | CP64 | CP74 |
|------------------------------|-------------|-------------|-------------|
| with open platform | 11 910 | 14 000 | 15 025 |
| equipped with leveling blade | 12 584 | 14 107 | 15 110 |
| with ROPS/FOPS cab & AC | 12 450 | 14 545 | 15 565 |
| equipped with leveling blade | 13 125 | 14 647 | 15 669 |

Weight at Drum

| | | | |
|------------------------------|------|------|--------|
| with open platform | 6561 | 8662 | 9757 |
| equipped with leveling blade | 7510 | 8859 | 9865 |
| with ROPS/FOPS cab & AC | 6702 | 8802 | 9898 |
| equipped with leveling blade | 7651 | 9000 | 10 095 |

Static Linear Load- kg per linear cm

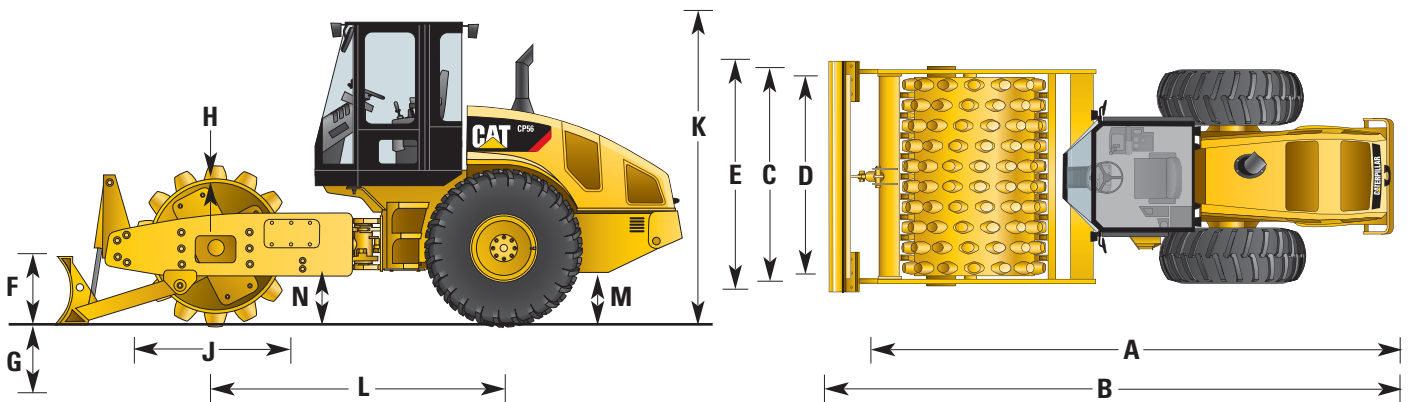
| | kg/cm | kg/cm | kg/cm |
|-------------------------|---------------------|---------------------|---------------------|
| with open platform | 30.7 | 41.4 | 46.9 |
| with ROPS/FOPS cab & AC | 31.4 ⁽¹⁾ | 42.2 ⁽²⁾ | 47.7 ⁽²⁾ |

⁽¹⁾ Meets NFP 98736 class: VM3

⁽²⁾ Meets NFP 98736 class: VM4

Dimensions

All dimensions are approximate.



| | CS/CP56 mm | CS/CP64 mm | CS/CP74 mm |
|-------------------------------------|---------------|---------------|---------------|
| A Overall length | 5860 | 5970 | 5970 |
| B Length with blade | 6390 | 6520 | 6520 |
| C Overall width | 2300 | 2300 | 2300 |
| D Drum width | 2130 | 2130 | 2130 |
| E Width with blade | 2500 | 2500 | 2500 |
| F Blade height | 680 | 680 | 680 |
| G Blade cutting depth | 127/120 | 127/120 | 127/120 |
| H Drum shell thickness | 30/25 | 30/25 | 40 |
| J Drum diameter | 1524/1295 | 1524/1295 | 1524/1295 |
| Drum diameter over pads (shell kit) | 1746/1549 | 1746/1549 | 1746/1549 |
| K Height at ROPS/FOPS canopy | 3070 | 3070 | 3070 |
| Height at ROPS/FOPS cab | 3070 | 3070 | 3070 |
| L Wheelbase | 2900 | 2900 | 2900 |
| M Ground clearance | 537/555 | 537/555 | 537/555 |
| N Curb clearance | 490/510 | 490/510 | 490/510 |
| Inside turning radius | 3680 | 3680 | 3680 |
| Outside turning radius | 5810 | 5810 | 5810 |

Total Customer Support System

Service capability. Most dedicated dealer support system to ensure fast service whether at the dealer's shop or in the field by trained technicians using the latest tools and technology.

Parts availability. Most parts on dealer's shelf when you need them. Computer-controlled, emergency search system backup.

Parts stock lists. Dealer helps you plan on-site parts stock to minimize your parts investment while maximizing machine availability.

Literature support. Easy-to-use parts books, operation and maintenance manuals and service manuals to help you get maximum value from your Cat equipment.

Remanufactured parts. Pumps and motors, pod-style weight housings, engines, fuel system and charging system components available from dealer at a fraction of new part cost.

Machine management services. Effective preventive maintenance programs, cost-effective repair options, customer meetings, operator and mechanic training.

Flexible financing. Your dealer can arrange attractive financing on the entire line of Cat equipment. Terms structured to meet cash flow requirements. See how easy it is to own, lease or rent Cat equipment.

Optional Equipment

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

**Roll Over Protective Structure/
Falling Object Protective Structure
(ROPS/FOPS) Canopy.** A two-post (CS/CP56) or four-post (CS/CP64,74) 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.

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.

Leveling Blade. Designed to bolt onto the drum yoke of the CS/CP56, CS/CP64, and CS/CP74. Complete unit includes heavy-duty blade, reversible/replaceable cutting edges, replaceable wear plates, a heavy-duty hydraulic lift cylinder and foot operated control valve. Moldboard is constructed of heavy-duty steel.

Two-Piece Padfoot Shell Kit.

Bolts onto the smooth drum CS56, CS64, and CS74. 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.

AccuGrade™ Compaction GPS Mapping and Measurement

Assists the operator in determining the compaction level of a soil material and maps the results using AccuGrade GPS mapping systems. Includes graphic display, GPS receiver and mast, radio, accelerometer, and cables. AccuGrade Office software available separately.

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.

Radio Ready. Includes speakers and mounting bracket. Does not include radio.

Fast Fuel Fill System. With fast fill connector for rapid refill operations.

Fuel Door. With lockable rear access door for easy access to fuel fill port.

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 (CS/CP56)

| | Depth mm | Density % | 150/300 mm Layers |
|---------|----------|-----------|-------------------|
| Surface | 0-500 | >98 | 190/380 m³/h |
| Shallow | 500-3000 | 95-98 | 345/610 m³/h |
| Deep | >3000 | 90-95 | 610/1150 m³/h |

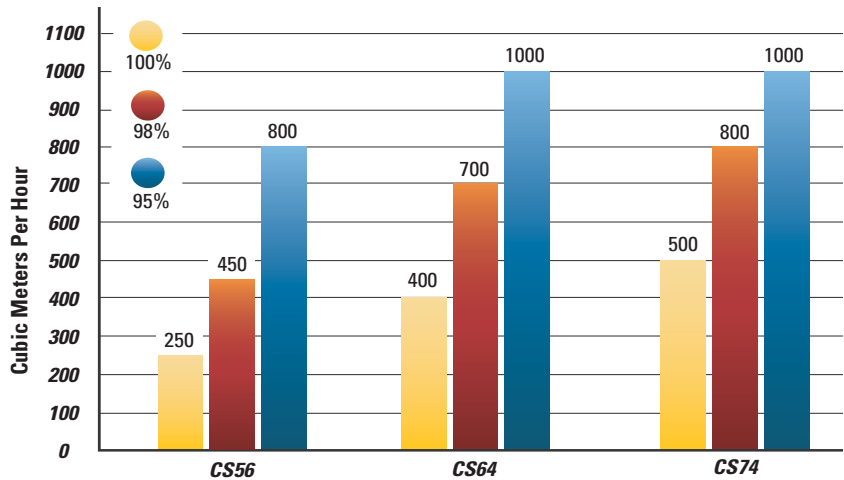
Based on depth of fill below final grade (surface)

Based on final compacted thickness of layer

Density spec. is based on Standard Proctor Test

Productivity increases with machine weight - (see chart at right)

Productivity Comparisons



% Compaction of Standard Proctor
150 mm Crushed Limestone Base

Results are similar for padfoot drums.
Results may vary for different applications.

Machine Selection

| Application | Layer Thickness mm | Smooth Drum | | | Padfoot Drum | | |
|---|--------------------|-------------|------|------|--------------|------|------|
| | | CS56 | CS64 | CS74 | CP56 | CP64 | CP74 |
| Sand, Clayey or Silty Sand, Mine Tailing | 150-300 | ● | ▲ | □ | □ | □ | □ |
| | 300-450 | ▲ | ● | ▲ | □ | □ | ▲ |
| | 450-600 | □ | ▲ | ● | □ | ▲ | ▲ |
| Clay, Sandy or Silty Clay, Stabilized Clay | 150-300 | ▲ | ▲ | ▲ | ● | ▲ | □ |
| | 300-450 | □ | ▲ | ▲ | ▲ | ● | ▲ |
| | 450-600 | □ | □ | ▲ | □ | ▲ | ● |
| Silt, Sandy or Clayey Silt, Coal, Ash, Solid Waste | 150-300 | ▲ | ▲ | □ | ● | ▲ | ▲ |
| | 300-450 | ▲ | □ | □ | ▲ | ▲ | □ |
| | 450-600 | □ | □ | - | ▲ | □ | □ |
| Base Aggregate, Gravel, Crushed Rock, Stabilized Base | 150-300 | ▲ | ▲ | ● | □ | □ | □ |
| | 300-450 | □ | ▲ | ▲ | □ | □ | ▲ |
| | 450-600 | - | □ | □ | □ | ▲ | ▲ |

□ Good ▲ Better ● Best

Shell Kit Performance

| | Padfoot Drum | Shell Kit | Shell Kit Performance | Performance Ranking | |
|----------------|--------------|-----------|--|---------------------|-----------|
| Number of Pads | 140 | 120 | Less Kneading better for silt | Padfoot Drum | Shell Kit |
| Pad Height | 127 mm | 90 mm | Less Penetration better for silt and sandy clay | Heavy Clay | ● □ |
| Weight at Drum | 56 6616 kg | 7858 kg | Higher Ground Pressure better for sandy clay | Sandy Clay | □ ● |
| | 64 8920 kg | 9430 kg | | Silt with Clay | □ ● |
| | 74 10 089 kg | 10 599 kg | | Slopes/Trenches | ● □ |
| Max. Amplitude | 1.8 mm | 1.2 mm | Smaller Drum Movement better for silt and clay | Thick Layers | ● □ |

CS/CP56, CS/CP64 and CS/CP74 Vibratory Soil Compactors

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at www.cat.com

Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment. See your Caterpillar dealer for available options.

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