

CS-573D CS-583D

Vibratory Soil
Compactors



	CS-573D		CS-583D	
Cat® 3116T Turbocharged Diesel Engine				
Gross Power	114 kW	153 hp	114kW	153 hp
Compaction Width	2134 mm	84"	2134 mm	84"
Operating Weight (with ROPS/FOPS cab)	13 180 kg	29,060 lb	14 850 kg	32,740 lb

Productivity, Serviceability and Comfort in a Durable Package

The CS-573D and CS-583D Soil Compactors have been designed to offer enhanced production capabilities, simplified service, industry-leading reliability and exceptional operator comfort.

Engine

Cat® 3116T turbocharged diesel engine delivers 114 kW (153 hp) and is built for performance and reliability without sacrificing fuel economy.

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Dual Propel Pumps

The exclusive dual pump propel system provides a separate balanced flow to both the rear drive axle and the front drum drive motor. This system enables the operator to achieve superior gradeability and maintain machine control while compacting on a grade. Dual pumps also minimize drum and wheel spin-out in loose underfoot conditions.

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Setting industry standards... again.

Based upon the industry-proven reputation of the Caterpillar® 500C-Series Soil Compactors, the new 500D-Series establishes new standards for productivity, comfort and serviceability in the soil compaction industry.





Vibratory System

Pod-style weight housings ensure peak vibratory performance and minimal service. Pods are replaceable and feature bearing lubrication service intervals of 3 years/3000 hours.

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Operator's Station

Based on the successful Cat® G-Series Wheel Loader operator's station, the 500D-Series Soil Compactors feature excellent operator 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 smooth ride.

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Cab

The cab on the 500D-Series Soil Compactors is engineered to provide the operator unparalleled viewing area and comfort. Integrated, factory installed air conditioning is an option. The cab may be an option in some areas and standard in others. Consult your dealer for specifics.

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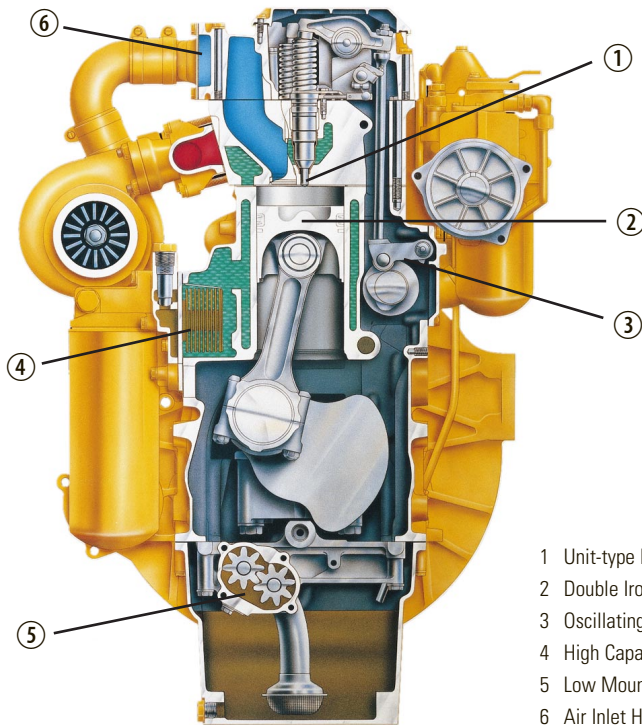
Serviceability

Simple ground level access to all daily maintenance points and the fuel fill through a convenient side access door. The new rearward tilting one-piece fiberglass hood allows complete engine access. The operator's station tilts forward to provide access to the hydraulic pumps.

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Caterpillar® 3116T Engine

Industry-proven Caterpillar technology designed to provide unmatched performance, reliability and fuel economy.



- 1 Unit-type Direct Injection Fuel System
- 2 Double Iron Ring Band Piston Design
- 3 Oscillating Roller Cam Follower
- 4 High Capacity Oil Cooler
- 5 Low Mounted Oil Pump
- 6 Air Inlet Heater

Turbocharged for top performance and efficiency even at high altitudes with no derating up to 2500 m (8200 ft).

Unit injector system provides individually metered high-pressure, direct-injection of fuel for maximum efficiency.

High displacement-to-power ratio ensures long life and exceptional reliability.

Large oil cooler reduces oil deterioration and varnishing of internal parts.

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

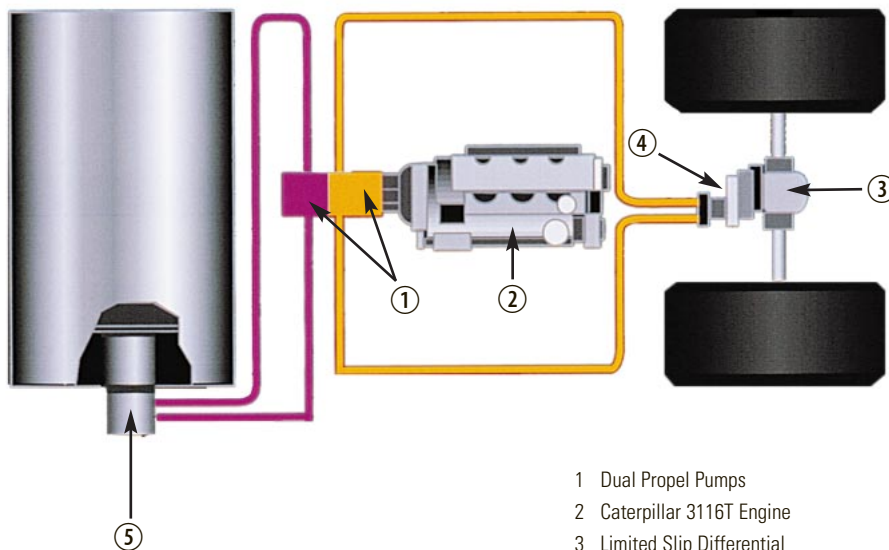
Dual fuel filters and water separator offer superior protection for the unit injection system.

Air inlet heater helps cold weather starting.

Meets U.S. EPA emissions standards.

Dual Pump Propel System

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



- 1 Dual Propel Pumps
- 2 Caterpillar 3116T Engine
- 3 Limited Slip Differential
- 4 Rear Wheel Drive Motor
- 5 Drum Drive Motor

Dual propel pumps provide separate, balanced flow to the rear wheel axle and the drum drive motors to help prevent spin-out in soft material; improves gradeability.

Limited slip differential provides balanced tractive effort to both rear wheels.

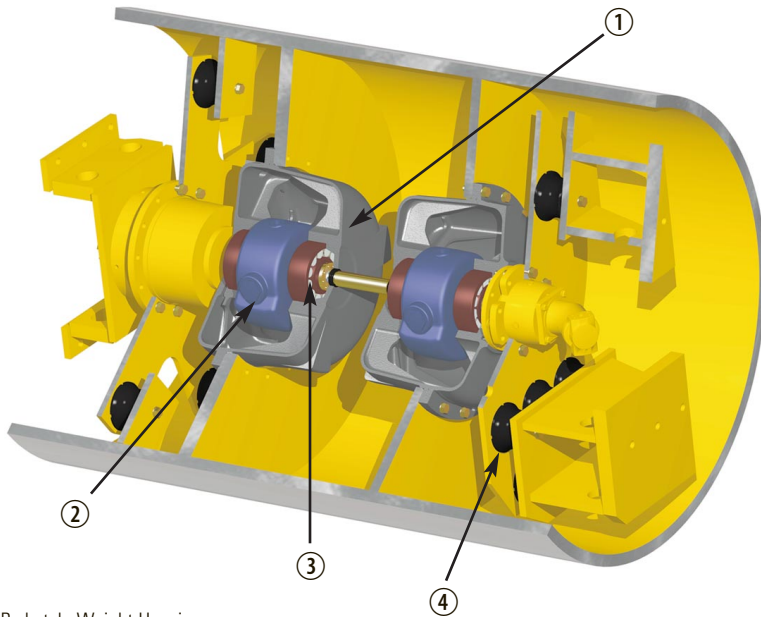
Two speed ranges for versatile operation. Low speed range for vibratory operation and maximum torque when grade climbing. High speed range moves machine quickly over longer distances.

Flushing valves in each propel circuit helps keep hydraulic oil cool and clean.

High travel speed up to 12.7 km/h (7.8 mph).

Vibratory System

An advanced pod-style system 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 are assembled and sealed at the factory to ensure cleanliness, longer bearing life and easier field exchange or service with Cat reman components.

Dual amplitude works efficiently in a wider range of applications. Changeable from the operator's station.

Heavy-duty bearings for the eccentric weight shaft allow higher frequency for greater force.

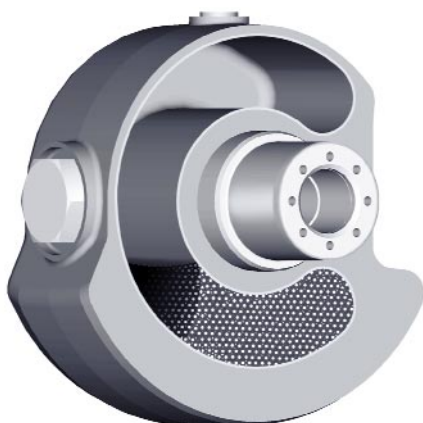
3 year/3000 hour vibratory bearing lube service interval for reduced maintenance.

Improved isolation mounts allow more force to be transmitted to the ground and less vibration to the operator.

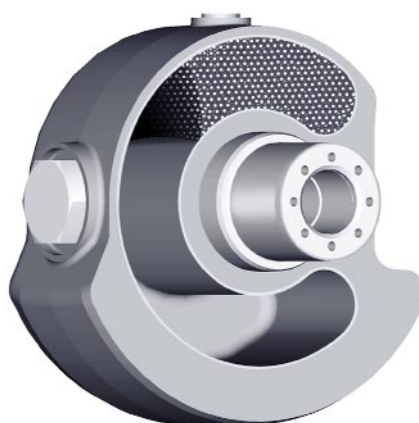
Patented Eccentric Weights

Reliable dual amplitude selection and innovative design ensure precise performance.

High Amplitude



Low Amplitude



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

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

Improved reliability no chance of shot wedging together. System reliability is superior to swinging mechanical weights.

Long service life with no heavy weights to slam together, no metal fragments to contaminate the bearing system.

Operator's Station

Ergonomically designed for maximum operator productivity. Optional cab offers excellent visibility and unmatched comfort.



Single lever control for propel and vibratory On/Off provides simple and low effort operation.

Padded adjustable wrist rest helps reduce operator fatigue.

Steering console and operational gauges are infinitely adjustable within the tilt range to the desired position of the operator. Entire console tilts for roomy entrance and exit.

Exceptional visibility to the drum, rear tires and the rear of the machine.

Comfortable and durable seat is fully adjustable to include fore/aft position, bottom cushion height, suspension stiffness and flip-up arm rests with a 76 mm (3") wide retractable seat belt.

Isolated operator's station with four heavy-duty rubber mounts reduce machine vibration transmitted to the operator.



One-Piece Hood Design

The new one-piece fiberglass hood design provides excellent service access and exceptional operator visibility.



Excellent visibility to the rear tires for working near obstructions or when maneuvering around the job site.

One-piece fiberglass hood tilts rearward and provides unrestricted engine access.

Electric actuator lifts the hood with the flip of a switch located at the rear of the machine.

Lockable ground level service door provides convenient access to all daily maintenance points without raising the hood.

Low sound levels for the operator and the ground crew due to the one-piece hood design and the rear-mounted remote cooling package.

Serviceability

Simplified service access, extended service intervals and convenient daily inspection area minimizes maintenance time and increases work time.



Convenient ground level service door allows access to all daily maintenance checks and fuel fill.

Visual indicators allows easy check of radiator coolant, hydraulic oil tank and filters and air restriction indicator.

One-piece fiberglass hood tilts rearward with an electronic actuator for complete access to the engine and cooling system.

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

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

3 year/3000 hour vibratory bearing lube service interval for reduced maintenance.

Quick connect hydraulic test ports simplify system diagnostics.

Electrical wiring is color-coded and numbered to simplify troubleshooting.

Nylon braided wrap and all-weather connectors ensure electrical system integrity.

Maintenance-free Caterpillar batteries are protected by bolt-on covers in the rear of the machine on either side. Caterpillar batteries are specifically designed for maximum cranking power and protection against vibration.

Scheduled Oil Sampling (S•O•SSM) ports allow for simple fluid collection.

Factory Reman parts are a cost-effective and reliable solution to keep your machines productive. Caterpillar offers a large choice of Reman components including vibratory drum pods.



The fuel fill, engine oil dip stick, hydraulic tank site gauge, air restriction indicator, radiator level site gauge and electrical disconnect switch are all accessible for easy daily service from the lockable ground level service door.

Engine

Four-stroke cycle, six cylinder Caterpillar® 3116T turbocharged diesel engine. Meets EPA and CARB emissions engine regulations.

Ratings at	RPM	kW	hp
Gross power	2200	114	153

Ratings of Caterpillar machine engines are based on standard air conditions of 25°C (77°F) and 100 kPa (29.61" Hg) dry barometer. Power is based on using 35° API gravity fuel having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 30°C (86°F) [ref. a fuel density of 838.9 g/L (7.001 lb/U.S. gal)]. 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 2500 m (8200') altitude.

The following ratings apply at 2200 RPM when tested under the specified standard conditions:

Net Power	kW	hp
ISO 9249	108	145
SAE J1349 Jan90	108	145
EEC80/1269	108	145

Dimensions

Bore	105 mm	4.13"
Stroke	127 mm	5"
Displacement	6.6 liters	403 cu. in.

Dual-element, dry-type air cleaner with visual restriction indicator.

Vibratory System Specifications

	CS-573D		CS-583D	
Drum diameter (over drum)	1524 mm	60"	1524 mm	60"
Drum width	2134 mm	84"	2134 mm	84"
Drum shell thickness	30 mm	1.2"	40 mm	1.6"
Frequency	31.9 Hz	1914 vpm	30 Hz	1800 vpm
Eccentric weight drive	Hydrostatic drive		Hydrostatic drive	

Nominal Amplitude

High	1.70 mm	0.067"	1.70 mm	0.067"
Low	0.85 mm	0.033"	0.85 mm	0.033"

Centrifugal Force

	@ 1914 vpm		@ 1800 vpm	
Maximum	266 kN	60,000 lb	311 kN	70,000 lb
Minimum	133 kN	30,000 lb	156 kN	35,000 lb

Weight at Drum

With ROPS/FOPS cab	7460 kg	16,450 lb	9450 kg	20,830 lb
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Linear Force*

Static	35.0 kg/cm	196 lb/in	44.3 kg/cm	248 lb/in
Centrifugal (high amplitude)	1.25 kN/cm	714 lb/in	1.46 kN/cm	833 lb/in

*Meets NFP 98736 class:

VM3 - CS-573D

VM4 - CS-583D

Electrical

The 24-volt electrical system consists of two maintenance-free Cat batteries, color-coded and numbered wiring wrapped in nylon braid. The starting system provides 750 cold cranking amps (cca). The system includes a 55-amp alternator.

Service Refill Capacities

	Liters	Gallons
Fuel tank	265	70
Full fuel capacity	300	79
Cooling system	30	8
Crankcase	20	5.3
Eccentric weight housings	24	6.3
Differential & final drives	28	7.3
Hydraulic system	80	21
Filtration system (pressure type)		
Propel	15 micron absolute	
Vibratory	15 micron absolute	

Instrumentation

Alternator Light, Hour Meter, Fuel Gauge, Horn, Audible Warning Horn for the: Engine Oil Pressure Light, Engine Coolant Temperature Light, Hydraulic Oil Temperature Light, Low Charge Pressure Light.

Operator and Machine Protective Equipment

Roll Over Protective Structure (ROPS)

is a two-post type that bolts onto flanges integral with the operator platform. The structure meets SAE J1040 May94 and ISO 3471-1994. This structure may be an option in some areas and standard in others. Consult your dealer for specifics.

Backup Alarm — 112 dB(A) alarm sounds whenever the machine is in reverse. The backup alarm has three sound levels that can be changed with a switch located on the alarm.

Seat Belt — 76 mm (3") wide seat belt is 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 two-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 toggle switch at the operator's console triggers an electric over hydraulic control to change speed ranges.

Speeds (forward and reverse):

Low range 6.4 km/h – 4.0 mph
High range 12.7 km/h – 7.8 mph

Gradeability:

with or without vibration 55%
(subject to underfoot conditions)

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 3.68 m (12' 1")
Outside 5.81 m (19' 1")

Steering angle:

(each direction) ± 34°

Oscillation angle:

(each direction) ± 15°

Hydraulic system:

Two 76 mm (3") bore, double-acting cylinders powered by a gear-type pump.

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.

Tires:

587 mm (23.1") x 660 mm (26")
8-ply flotation
12-ply flotation tires may be an option in some areas and standard in others.
Consult your dealer for specifics.

Axle:

Heavy-duty fixed rear axle with a limited slip differential for smooth and quiet torque transfer.
Axle width 1.67 m (5' 6")

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 and within the rear axle. 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.

**Braking system meets SAE J1472 June87 and EN500.*

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. Two vertical pins provide a steering angle of ± 34° and a horizontal pin allows frame oscillation of ± 15°. Sealed-for-life hitch bearings never need maintenance.

Total Customer Support System

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.

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

Remanufactured parts — vibratory pods, pumps and motors, engines, fuel system and charging system components available from dealer at 20 - 50% of new part cost.

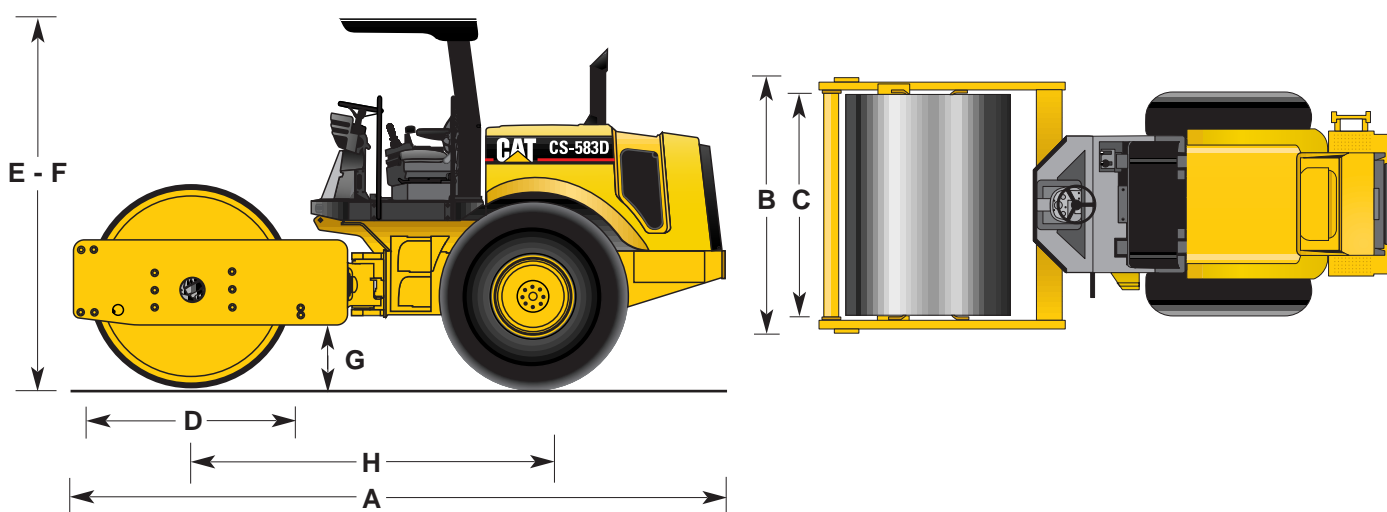
Service capability — dealer's shop or fast field service by trained technicians using latest tools and technology.

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

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

Dimensions

	CS-573D		CS-583D	
A Operating length	5.51 m	(18' 1")	5.51 m	(18' 1")
B Max. machine width	2.34 m	(7' 8")	2.37 m	(7' 9")
Outside turning radius	5.81 m	(19' 1")	5.81 m	(19' 1")
Inside turning radius	3.68 m	(12' 1")	3.68 m	(12' 1")
C Compaction width	2.13 m	(7')	2.13 m	(7')
D Drum diameter	1524 mm	(60")	1524 mm	(60")
E Height at ROPS/FOPS canopy	3.03 m	(9' 11")	3.03 m	(9' 11")
F Height at ROPS/FOPS cab	3.07 m	(10' 1")	3.07 m	(10' 1")
G Ground clearance	483 mm	(19")	483 mm	(19")
H Wheelbase	2.90 m	(9' 6")	2.90 m	(9' 6")



Operating Weights (approximate)

Weights include lubricants, coolant, full fuel and hydraulic tanks and a 80 kg (175 lb) operator.

Machine Weights	CS-573D		CS-583D	
with open platform	12 690 kg	27,980 lb	14 360 kg	31,660 lb
with ROPS/FOPS canopy	12 900 kg	28,450 lb	14 570 kg	32,120 lb
with ROPS/FOPS cab	13 180 kg	29,060 lb	14 850 kg	32,740 lb
Weight at Drum				
with open platform	7265 kg	16,020 lb	9250 kg	20,390 lb
with ROPS/FOPS canopy	7350 kg	16,200 lb	9340 kg	20,580 lb
with ROPS/FOPS cab	7460 kg	16,450 lb	9450 kg	20,830 lb

Optional Equipment

Note: Some options listed may be an option in some areas and standard in others. Consult your dealer for specifics.

Roll Over Protective Structure/Falling Object Protective Structure (ROPS/FOPS) 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.

ROPS/FOPS Cab includes one access door, tinted safety glass windows, electric wipers front and rear, heater/defroster, two vertically sliding side windows for ventilation, two exterior rear view mirrors, two front-facing and two rear-facing working lights, interior dome light and coat hook. Cab is fully EROPS rated and meets SAE J1040 May94, SAE J231 Jan81, ISO 3449-1992 and ISO 3471-1994.

Air Conditioning integral system provides operator comfort for cab configurations working in higher ambient temperatures.

Sun Visor for the front windshield can be installed on machines equipped with a ROPS/FOPS cab.

Rear View Mirrors are available for internal use on machines equipped with a ROPS/FOPS cab or external use on machines equipped with a ROPS/FOPS canopy.

Operator Platform/Cab Lift Cylinder is available and provides a hydraulic cylinder to raise and lower either the operator platform or cab.

Variable Frequency is an electronic displacement control on the vibratory pump that is controlled by a frequency dial on the operator's station. Engine rpm remains unchanged for maximum hydraulic pump flow and torque to drive the vibratory motor. Frequency range is from 23.3 – 31.9 Hz (1400 – 1914 vpm) on the CS-573D and 23.3 – 30 Hz (1400 – 1800 vpm) on the CS-583D. This makes it easier to match frequency, amplitude and working speed to job conditions.

Vibratory Gauge is mounted on the console in front of the operator and displays the actual vibratory system frequency. Most useful when ordering the variable frequency option.

Engine Tachometer displays engine speed (rpm) on an analog dial. Available as a Custom Shop Order (CSO).

Compaction Indicator provides a single display indicating material density on a LED panel. Integral LCD display shows travel speed and compaction meter value. Recommended only on machines equipped with a ROPS/FOPS cab. Available as a Custom Shop Order (CSO).

Compaction Meter Group assists the operator in determining compaction of material. Consists of a frequency gauge, a compaction value gauge and resonance value gauge. Available as a Custom Shop Order (CSO).

Working Light Package for machines equipped with ROPS or a ROPS/FOPS canopy. Illuminates immediate work area under dim or dark conditions. Consists of two front-facing and two rear-facing flood lights.

This system is intended for use under working conditions and not for highway transport purposes.

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

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

Urethane Drum Scrapers provides a front and rear scraper for continuous contact with the drum surface and replaces the standard steel scraper.

12-Ply Tires with diamond tread offer enhanced durability in harsh applications. Standard in some areas. Consult your dealer for specifics.

Two-Piece Padfoot Shell Kit bolts onto the smooth drum (CS-573D only) and features 90 mm (3.5") high pads. Includes special bumper with scrapers.

QEHQ9850 (02/02)
(Replaces QEHQ9616)

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Featured machines in photography may include optional equipment.
Materials and specifications are subject to change without notice.

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