CB-214D
CB-224D
Asphalt Compactors

CB-225D
Combi Asphalt Compactor

	CB-214D	CB-224D	CB-225D Combi
Operating weight (with ROPS)	2490 kg	2670 kg	2450 kg
Compaction width	1000 mm	1200 mm	1200 mm
Gross power	23.5 kW/31.5 hp	23.5 kW/31.5 hp	23.5 kW/31.5 hp

Production-Sized Results in Small Packages

Maneuverability, transportability and versatility are combined in easy-to-operate machines that will help you meet and exceed your tons-per-day production needs.

The CB-214D, CB-224D and CB-225D are versatile machines that can be used as the only compactor on small sized jobs or on larger jobs as a support roller for high-production compactors. As a support roller, they work well for turning lanes, crossovers, shoulders and other similar sized jobs.

With its 1000 mm wide drums, the CB-214D is well suited for rental customers and contractors or agencies that maintain streets, roads, alleys or are adding paths to parks and recreation areas. In these applications, the tight turning radius and easy maneuverability make it a perfect match.

The CB-224D provides greater production capabilities with its 1200 mm wide drums. Its high amplitude and drum width give it the capacity to achieve a tons-per-day production rate that make it an excellent match for shoulders, small parking lots, lane additions or other similar sized jobs.

Meanwhile, the CB-225D is versatility driven. Its steel front drum and rubber tired rear wheels allow it to function as both a vibratory and a pneumatic compactor. The CB-225D produces a tight mat with a smooth finish.

All three machines provide a comfortable and convenient operating environment that contribute to the versatility of the machines. The roomy operator's station provides excellent visibility to drum edge or tire contact points. Their low-profile design provides great visibility.

The outstanding rearward visibility allows the operator to nearly touch the leading edge of the drum to obstructions.

In addition, the machines are quiet for the operator and spectators, especially beneficial on commercial jobs when compaction must coincide with day-to-day business operations. They also are simple to operate.

Caterpillar compactors are supported by an extensive dealer network and parts distribution system as well as by Caterpillar dealer representatives that are highly trained and motivated. Caterpillar offers a comprehensive line of asphalt pavers, cold planers, compactors, reclaimers and stabilizers.

Caterpillar® 3013 Engine

Reliable and durable diesel engines for years of low maintenance operation.

Precise balance and optimum running speed for smooth operation and extended engine life.

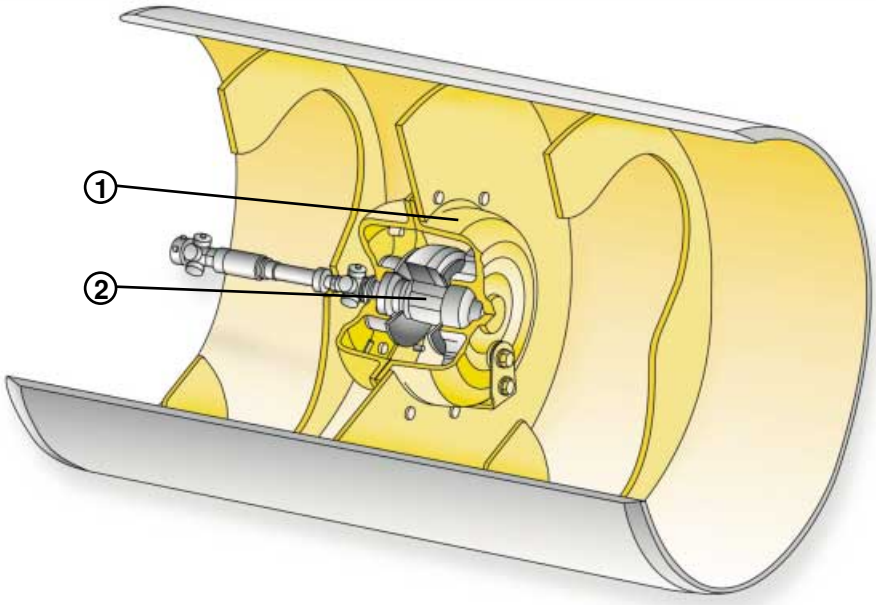
Engine is liquid-cooled keeping temperature low and helping reduce component wear.

Timing drive use three helically cut gears that help reduce noise levels.

Heat-treated chrome molybdenum steel crankshaft provides durable service life.

Vibratory System

Precise system delivers optimum compactive force.



Pod-style weight housings are assembled and sealed at the factory to ensure cleanliness, extended bearing life and easy field exchange/service.

Change interval for bearing lubrication is every three years or 3,000 hours.

Balance between frequency and amplitude provides a good mat finish for commercial work.

1 Pod-style weight housing

2 Fixed eccentric weight

Operator Comfort

Operating ease and comfort promote all-day productivity.

Single-lever control provides simplified operation, making the machines a perfect fit for inexperienced operators.

Easy-to-understand instrument panel allows the operator to quickly verify the status of machine systems.

Lockable cover protects instrumentation and gauges.

Low sound levels make them comfortable for both operators and spectators.

Operator's station is isolated with four rubber mounts that help eliminate vibration before it reaches the operator, controls and instrumentation.

Operator's Station

The machines for EC territories are equipped with a suspended seat with switch that prevents movement of the machine if the operator is not seated.

Stationary seat is standard.

The sliding seat is optional.

Seat slides from side to side and locks into three positions – right, center and left.

When positioned on the left or right side, operator has unobstructed visibility to drum edge or wheel contact points.

Roomy operator's station provides plenty of leg room for all-day operation.

Adjustable bucket seat provides lasting comfort.

Optional suspension seat with armrests enhances ride.

Note: machine is shown with a suspension seat that is optional.

Excellent Forward and Rearward Visibility

Low-profile design provides convenient control of machines.

Excellent forward visibility allows the operator to see objects 0.58 m high and 1 m in front of the machine.

Rearward visibility is even better. Operator can see objects that are 0.35 m behind the machine and flush to the surface.

Low-profile engine enclosure provides unobstructed sight lines to ground personnel working near machine.

Water Spray System

Corrosion-proof system and extended-life components provide reliable operation.

Constant or intermittent spray capabilities provide extended operation between refills.

Triple water filtration reduces machine downtime caused by system clogs.

Extended-life water pump provides optimum spray and flow.

Water pump and filters are conveniently located for easy access.

Large water tank drain allows system to be drained in less than five minutes.

Drum Design Keeps Production High

Machined drum surfaces help ensure a smooth mat.

Specially designed drum edges help eliminate marks on deep lifts or when turning.

Drums are constructed of rolled steel plate and are finished to reduce surface irregularities.

Replaceable rubber mounts isolate vibration and enhance vibratory capabilities.

Each drum is fitted with two retractable, spring-loaded, self-adjusting scrapers, positioned at the front and rear of each drum.

Ends of each drum are fitted with steel plates that help prevent rocks, soil, asphalt or other material from entering the ends of the drums.

Tires Enhance Versatility – CB-225D

Tires manipulate the mat under and between its wheels.

Steel front drum and rubber tires at the rear allow a single machine to function as both a double drum and pneumatic compactor.

Four rubber tires generate a high ground contact pressure that penetrates deep into the lift.

Because the tires are flexible, horizontal pressures develop, assisting with compaction.

Each tire is fitted with a replaceable, adjustable scraper. The scrapers can be positioned above the tires when the they are not needed.

Serviceability

Time-saving features reduce maintenance requirements and increase production.

Fiberglass engine enclosure pivots upward and locks open with a prop rod.

External engine components, hydraulics and routine service points are clustered in easy-to-access locations.

Daily Visual Maintenance system simplifies verification of fluid levels and filter conditions.

Extended-life oils increase maintenance intervals for the vibratory system, hydraulic system and engine oil.

Remote-mounted drains for hydraulic and engine oils provide simplified collection of fluids.

Quick-connect hydraulic test ports simplify system diagnosis.

Electrical wiring is color-coded and numbered for simple troubleshooting.

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

Engine

Caterpillar 3013 naturally aspirated, water-cooled, 4-stroke, 3-cylinder diesel engine.

Ratings at 2800 rpm	kW	hp
Gross power	23.5	31.5

The following ratings apply at 2800 rpm when tested under the conditions for the specified standard:

Net Power	kW	hp
ISO 9249	22.5	30.2
EEC80/1269	22.5	30.2

Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler, and alternator.

Dimensions

Bore	84 mm
Stroke	90 mm
Displacement	1496 cm^3

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

Transmission

CB-214D and CB-224D – Variable-displacement piston pump supplies pressure flow to fixed-displacement hydraulic motors that drive the front and rear drums.

CB-225D – Variable-displacement piston pump supplies pressure flow to a fixed-displacement hydraulic motor that drives the front drum, and the pump supplies pressure flow to two fixed-displacement motors that drive the rear wheels.

A propel lever located at the operator's station provides smooth hydrostatic control of the infinitely variable speeds in both forward and reverse.

Speed ranges

Work	0 - 6.5 km/h
Transfer	6.5 - 10 km/h

Instrumentation

The control console includes: steering wheel; water spray system switch; vibratory drum selector switch; horn; start switch; heat start switch; parking brake; and a four-segment light for hydraulic oil temperature, oil pressure, alternator, and engine coolant. The vibratory system is activated with a switch on the top of the propel lever. When the vibratory system is activated, a vibration indicator light illuminates. The engine throttle lever is located on the left side of the control console pedestal. If equipped with optional light packages, switches and a turn signal light are located on the control console.

The machine is protected from vandalism with several covers. The control console, hood and compartment for the Operation and Maintenance Manual are equipped with lockable covers.

Brakes

Brake systems meet SAE J1472, ISO 3450 and EN500-4.

Service

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

Secondary and Parking

- A spring-applied, pressure-released brake inside each propel motor immobilizes the roller. Activation is by a switch on the operator's console or when the engine is shut off.

Final Drives

CB-214D and CB-224D – High-torque, low-speed hydraulic motors directly drive each drum.

CB-225D – High-torque, low-speed hydraulic motor directly drives the front drum, and two high-torque, low-speed hydraulic motors directly drive the rear wheels.

Steering

An engine-driven gear-type pump supplies hydraulic fluid for the steering circuit.

Minimum turning radius	
	CB-214D
Inside drum edge	2510 mm
Outside drum edge	3510 mm
	CB-224D/CB-225D
Inside drum edge	2410 mm
Outside drum edge	3610 mm
Steering angle	32°

Hydraulic system: One 70 mm bore, double-acting cylinder powered by a gear-type pump.
Output at 2.800 rpm is 23 liter/min with relief valve at 117 bar.

Electrical System

The 12-volt electrical system includes one maintenance-free Cat battery and color-coded and numbered wiring wrapped in nylon braid. The system includes a 55-amp alternator.
The starting system provides 750 cold cranking amps.

Sound Levels

Sound level measured at the operator ear (sound pressure) is 80 dB(A), and average at spectator (sound pressure) measured at 7 m is 73 dB(A).

Wheels and Tires

CB-225D – 9.5/65-15 6-ply tires are standard. Each tire is equipped with a replaceable scraper. The scrapers help clean asphalt or soil off the tires.
The scrapers can be positioned above the tires when they are not needed.
Wheels are on a fixed axle.

Frame

Frame is fabricated from heavy gauge steel plate and joined at the center articulation pivot. Two self-aligning bearings on the pivot housing provide a ±32 degrees steering angle, and a horizontal pin provides a ±10 degrees oscillation angle. The articulation pivot is structurally reinforced for extended service life. For transport purposes, the articulation pivot can be secured at the zero steering angle.

Service Refill Capacities

	Liters
Fuel Tank	36
Crankcase	7.1
Hydraulic fluid tank	26
Hydraulic circuit	30
Drum spray system	160
Tire wetting system	28

Tire Wetting System

Tire Wetting System allows a solvent to be sprayed on the tire surfaces, helping prevent asphalt from adhering to the tires. One spray nozzle is positioned above each tire. The system is controlled with a momentary switch on the control console.

Capacity	28 liters

Water Spray System

Spray bars are constructed of stainless steel for corrosion resistance. The water tank is reinforced polyethylene.
An electric water pump provides either continuous or intermittent spray. Intermittent spray setting increases spray time by 50 percent over continuous setting. Triple filtration includes a filter on the tank fill spout, an in-line filter at the water pump and filters on each spray nozzle. Spray nozzles are easily removed without tools for cleaning.

Capacity	160 liters

Weights

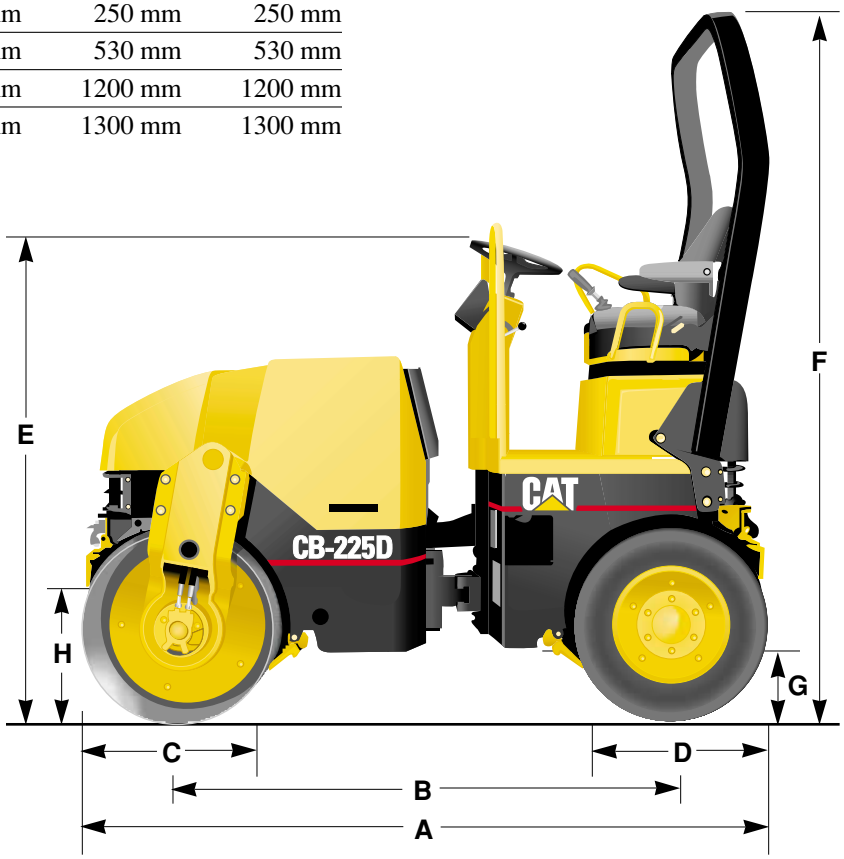
Operating weights include lubricants, 80 kg operator, full fuel tank, full hydraulic system and half-full water tanks (all weights are approximate).

	CB-214D	CB-224D	CB-225D
Operating without ROPS	2430 kg	2610 kg	2390 kg
at front drum	1160 kg	1260 kg	1280 kg
at rear drum	1270 kg	1350 kg	–
at rear wheels	–	–	1110 kg
weight per rear wheel	–	–	278 kg
Operating with ROPS	2490 kg	2670 kg	2450 kg
at front drum	1160 kg	1260 kg	1280 kg
at rear drum	1330 kg	1410 kg	–
at rear wheels	–	–	1170 kg
weight per rear wheel	–	–	292 kg

Dimensions

All dimensions are approximate.

		CB-214D	CB-224D	CB-225D
A	Length	2430 mm	2430 mm	2430 mm
B	Wheelbase	1730 mm	1730 mm	1730 mm
C	Drum diameter	700 mm	700 mm	700 mm
	Drum shell thickness	13.5 mm	13.5 mm	13.5 mm
D	Tire diameter	–	–	670 mm
E	Height at steering wheel	1760 mm	1760 mm	1760 mm
F	Height at ROPS	2585 mm	2585 mm	2585 mm
G	Ground clearance	250 mm	250 mm	250 mm
H	Curb clearance	530 mm	530 mm	530 mm
I	Compaction width	1000 mm	1200 mm	1200 mm
J	Machine width	1100 mm	1300 mm	1300 mm



Compaction Characteristics

	CB-214D	CB-224D	CB-225D
Vibration selections	Front or both	Front or both	Front
Eccentric weight drive	Hydraulic	Hydraulic	Hydraulic
Frequency	60 Hz	60 Hz	60 Hz
Nominal amplitude	0.5 mm	0.5 mm	0.5 mm
Centrifugal force per drum	25.4 kN	29.8 kN	29.8 kN
Load per cm of drum contact – Static	12.2 kg/cm	10.9 kg/cm	10 kg/cm

Optional Equipment

Standard and optional equipment may vary. Consult your Caterpillar dealer for specifics.

Roll Over Protective Structure (ROPS) is a two-post structure that bolts directly onto flanges welded to the machine frame. The ROPS meets ISO 3471.

Foldable ROPS includes pivots that allows the ROPS to fold, lowering shipping height.

Sun Canopy is a thermoformed plastic structure that blocks the operator's station from the sun. Structure is bolted to the ROPS.

Back-up Alarm emits a high-pitched sound when the machine is in reverse.

Working Light Package consists of two front headlights and one independent rear work light.

Roading Light Package consists of two front headlights, two rear tailights, two front-position lights, turn signals, hazard lights and one independent rear work light.

Rotating Beacon includes an amber beacon and mount that can be attached to machines with or without ROPS.

Spark Arrestor Muffler helps eliminate burning carbon particles that can exit the muffler.

Suspension Seat is mechanical type with vertical adjustments and armrests.

Sliding Seat slides across the width of the platform, helping enhance visibility to drum edge contact points.

Seat Switch includes a suspended seat with a switch that prevents movement of the machine if the operator is not seated. Mandatory for EC territories.

Coco Mats retain water as it is distributed by the water spray system. The mats allow water to seep out of them, providing continuous water distribution to drum surfaces.

Heat Retention Device helps trap heat and warms the tires on the CB-225D. The heat retention devices help eliminate asphalt from adhering to the tires.

Value Analysis

Versatile Operation

- High-frequency vibratory system
- CB-225D rubber tires make it effective on both asphalt and soil.

Productivity

- Responsive diesel power.
- High travel speeds.
- Nearly equal front-rear weight distribution.

Easy Control

- Single lever control of forward/reverse speeds.
- Low-effort steering.
- Excellent visibility.

Simplified Maintenance

- Simple, durable design.
- Rugged construction for extended service life.
- Easy access to all major components.

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.

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

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

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

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

CB-214D/CB-224D Asphalt Compactors
CB-225D Combi Asphalt Compactor

HEHG9715 (03/2000) ro

CATERPILLAR®