



CB-214E

CB-224E

Asphalt Compactors

CB-225E

Combi Asphalt Compactor



	CB-214E		CB-224E		CB-225E Combi	
Operating weight w/ROPS	2450 kg	5400 lb	2630 kg	5800 lb	2300 kg	5070 lb
Compaction width	1000 mm	39"	1200 mm	47"	1200 mm	47"
Gross power	24.4 kW (32.7 hp)					

Engine

Caterpillar 3013C naturally aspirated, water-cooled, 4-stroke, 3-cylinder diesel engine meets U.S. Tier 2 and 97/68/EC Stage II emission standards.

Ratings at 2,800 rpm	kW	hp
Gross power	24.4	32.7

Ratings of Caterpillar machine engines are based on standard air conditions of 25°C (77°F) and 99 kPa (29.32") 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.

The following ratings apply at 2,800 rpm when tested under the specified standard conditions for the specified standard:

Net Power	kW	hp
ISO 9249	22.6	30.3
EEC 80/1269	22.6	30.3

Dimensions

Bore	84 mm	3.3"
Stroke	90 mm	3.5"
Displacement	1496 cm ³	91 in ³

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

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 (hemispherical) is 109 Lwa.

Transmission

(CB-214E and CB-224E)

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

(CB-225E)

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

0-10 km/h	0-6 mph
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Final Drives

(CB-214E and CB-224E)

High-torque, low-speed hydraulic motors directly drive each drum.

(CB-225E)

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

Wheels and Tires

(CB-225E)

8.5/90-15K 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 retracted when they are not needed. The wheels are mounted 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.

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.

Tank Capacity 150 L 39 gals.

Tire Wetting System

Tire Wetting System allows an emulsion 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.

Tank Capacity 70 L 18.5 gals.

Instrumentation

The control console includes: steering wheel, water spray system switch, vibratory drum selector switch, horn; hazard flasher control, engine start switch with preheat and parking brake. The instrument panel cluster integrates the fuel level indicator, service hour meter and also light indicators for: roading lights, parking brake, hydraulic oil temperature, engine coolant temperature, alternator, engine oil pressure, vibration on, engine preheat, and turn signals. The vibratory system is actuated with a switch on the top of the propel lever. When the vibratory system is activated, a vibration indicator light illuminates. The engine throttle control is located on the right side of the control console pedestal. If equipped with optional light packages, switches are located on the control console.

The machine is protected from vandalism with several covers. The control console, hood and literature compartment are equipped with lockable covers.

Brakes

Brake systems meet EN 500-1, EN 500-4, SAE J1472 and ISO 3450.

Service brake features

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

Secondary brake features

- 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.

Service Refill Capacities

	Liters	Gallons
Fuel tank	46.5	12.3
Crankcase	6	1.6
Hydraulic fluid tank	26	6.9
Hydraulic circuit	30	7.9
Water spray system	150	39
Tire wetting system	70	18.5

Steering

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

	CB-214E		CB-224E		CB-225E	
Minimum turning radius						
Inside drum edge	2510 mm	99"	2410 mm	95"	2410 mm	95"
Outside drum edge	3510 mm	138"	3610 mm	142"	3610 mm	142"
Steering angle	32°		32°		32°	

Hydraulic system: One 70 mm (2.75") bore, double-acting cylinder powered by a gear-type pump. Output @ 2,800 rpm is 23 liter/min (6.1 gpm) with relief valve at 1,700 psi.

Weights (approximate)

Weights include lubricants, 80 kg (175 lb) operator, full fuel tank, full hydraulic system and half-full water tank.

	CB-214E		CB-224E		CB-225E	
Operating without ROPS	2390 kg	5270 lb	2570 kg	5670 lb	2240 kg	4940 lb
at front drum	1150 kg	2540 lb	1250 kg	2760 lb	1280 kg	2820 lb
at rear drum	1240 kg	2730 lb	1320 kg	2910 lb	—	—
at rear wheels	—	—	—	—	960 kg	2120 lb
weight per rear wheel	—	—	—	—	240 kg	530 lb
Operating with ROPS	2450 kg	5400 lb	2630 kg	5800 lb	2300 kg	5070 lb
at front drum	1150 kg	2540 lb	1250 kg	2760 lb	1280 kg	2820 lb
at rear drum	1300 kg	2870 lb	1380 kg	3050 lb	—	—
at rear wheels	—	—	—	—	1020 kg	2250 lb
weight per rear wheel	—	—	—	—	255 kg	560 lb

Compaction Characteristics

	CB-214E		CB-224E		CB-225E	
Vibration selections (drum)	Front or both		Front or both		Front	
Eccentric weight drive	Hydraulic		Hydraulic		Hydraulic	
Frequency	63 Hz	3780 vpm	63 Hz	3780 vpm	63 Hz	3780 vpm
Nominal amplitude	0.5 mm	.02"	0.5 mm	.02"	0.5 mm	.02"
Centrifugal force per drum	27.6 kN	6075 lb	31.4 kN	6975 lb	31.4 kN	6975 lb
Load per cm of drum contact/Pounds per linear inch:						
Static	12.3 kg/cm	70 lb/in	11.0 kg/cm	62 lb/in	11.0 kg/cm	62 lb/in

Dimensions

	CB-214E		CB-224E		CB-225E	
A Length	2430 mm	96"	2430 mm	96"	2430 mm	96"
B Wheelbase	1730 mm	68"	1730 mm	68"	1730 mm	68"
C Drum diameter	700 mm	27.6"	700 mm	27.6"	700 mm	27.6"
Drum shell thickness	13.5 mm	.53"	13.5 mm	.53"	13.5 mm	.53"
D Tire diameter	—	—	—	—	8.5/90-15K 6-ply	8.5/90-15K 6-ply
E Height at steering wheel	1760 mm	69"	1760 mm	69"	1760 mm	69"
F Height at ROPS	2585 mm	102"	2585 mm	102"	2585 mm	102"
G Ground clearance	250 mm	10"	250 mm	10"	250 mm	10"
H Curb clearance	530 mm	21"	530 mm	21"	530 mm	21"
I Compaction width	1000 mm	39"	1200 mm	47"	1200 mm	47"
J Machine width	1100 mm	43"	1300 mm	51"	1300 mm	51"

