

# CB-434D CB-434D XW

Vibratory Asphalt  
Compactors



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**Cat® 3054C Diesel Engine**

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**Gross power** 62 kW (83 hp)

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**Drum width**

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CB-434D 1.50 m (59")

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CB-434D XW 1.70 m (67")

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**Operating weight (w/ROPS)**

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CB-434D 7500 kg (16,538 lb)

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CB-434D XW 7700 kg (16,979 lb)

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## Productivity and Reliability in a Durable Package

*The CB-400 D-Series Asphalt Compactors offer performance, versatility and comfort that maximizes productivity while providing exceptional product quality.*

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### Vibratory System

Pod-style eccentric weights with more amplitude selections provide peak compaction performance and minimal service. High dynamic force helps achieve density in the fewest number of passes. The five amplitude vibratory system provides versatility for working in a variety of conditions. The optional dual amplitude, dual frequency system provides excellent versatility for the contractor with a flip of the switch from the operator's console.

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### CB-434D XW

The CB-434D XW utilizes a 1.7 m (67") drum for increased lane coverage. This versatile machine can be equipped with either the standard five amplitude vibratory system or the dual amplitude, dual frequency system.

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### Engine

Cat 3054C diesel engine delivers 62 kW (83 hp) and is built for performance and reliability with excellent fuel economy. The cooling system delivers fresh air from above the engine for clean and efficient operation.

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## Performance and reliability you can depend on.

*Based upon the industry-proven reputation of the Caterpillar® Asphalt Compactors, the CB-400 D-Series Asphalt Compactors establish innovative standards for productivity and reliability in the asphalt compaction industry.*

*Durable Cat® powertrain, field-proven hydraulic systems and vibratory systems, and the world's largest and most dedicated dealer support system ensures that the CB-400 D-Series Asphalt Compactors will provide maximum productivity.*



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**Operator's Station**

The operator's station features comfort and visibility. A tilting steering column, propel lever arm rest, and conveniently located and grouped control switches and gauges increase operator productivity and reduce fatigue. Heavy-duty isolation mounts provide a smooth ride. Machines with the ROPS/FOPS platform incorporate quick release handrails that can be individually adjusted to accommodate multiple operator positions. For FOPS protection to be effective, the operator must be seated under the canopy.

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**Water Spray System**

The large capacity 800 liter (211 gal) water tank provides increased working time and single points to fill and drain. Caterpillar's exclusive dual pump spray system provides the operator with an efficient, easy access drum watering system. The triple water filtration reduces contaminants, providing a reliable water spray system. An optional overnight freeze protection kit is also available for cool weather protection.

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**Serviceability**

The one-piece fiberglass hood opens upward and rearward to allow access to the engine and daily maintenance points. The daily check points are accessible from ground level. Ground level service is also provided on the water spray system with pumps, filters, and drain valves grouped together and centrally located.

The rear-mounted cooling system with fresh air intake reduces the need for cleaning. The engine oil change interval is 500 hours. Vibratory bearing lube service interval of 3 years/3000 hours keeps maintenance to a minimum and maximizes production. The articulation hitch area features sealed-for-life bearings that reduce the need for maintenance.

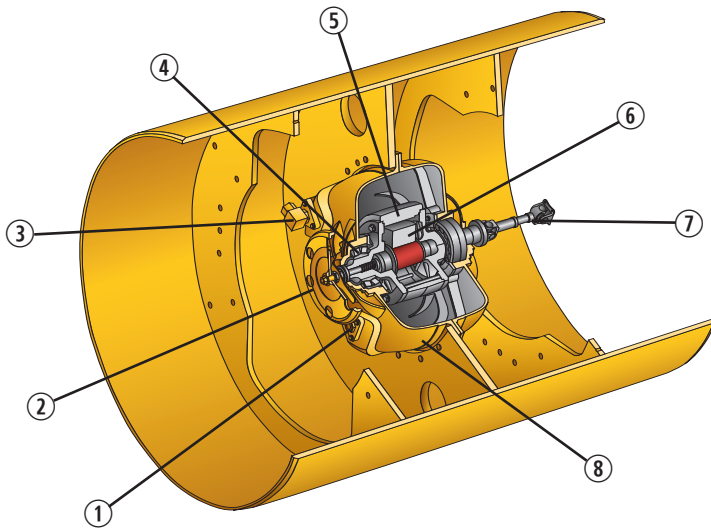
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**Comfort and serviceability you deserve.**

*The operator's station provides a comfortable and user friendly environment that promotes productive operation. Simplified service access and extended service intervals minimize maintenance time and increase overall machine production.*

## Five Amplitude Vibratory System

The pod-style vibratory system delivers optimum compactive force while offering serviceability advantages.



- |                                   |                               |
|-----------------------------------|-------------------------------|
| 1 Oil Level Sight Gauge           | 5 Fixed Eccentric Weight      |
| 2 Amplitude Selection Wheel       | 6 5-Position Counterweight    |
| 3 Oil Drain                       | 7 Weight Drive Shaft to Motor |
| 4 Eccentric Weight Shaft Bearings | 8 Eccentric Weight Housing    |

### Five Amplitude Selections

The five amplitudes with a single frequency of 53 Hz (3,200 vpm) provide efficient operation on thick or thin lift applications.

### Automatic Corresponding Rotation

Eccentric weight rotation automatically matches drum rotation providing good mat quality.

### Automatic Vibration Control

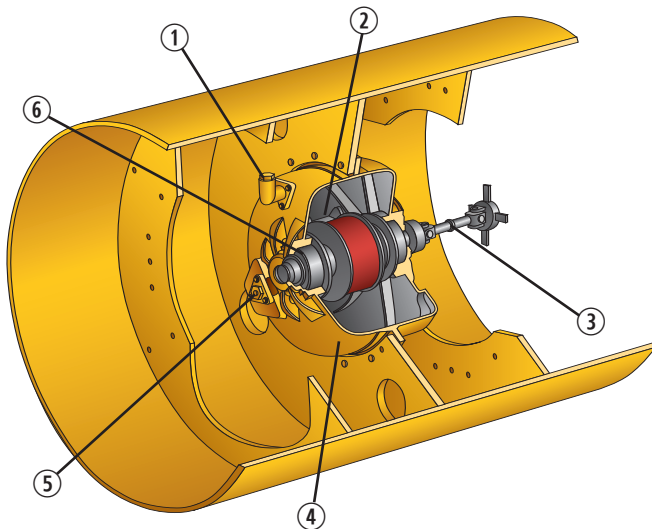
The vibratory system automatically starts when the propel lever is moved from neutral and stops when positioned in neutral. A manual vibratory control is also provided.

### 3 Year/3000 Hour Service Interval

Moving parts are separated from lubricating oil keeping oil clean to ensure long bearing life. Bearing oil has a 3 year/3000 hour service interval.

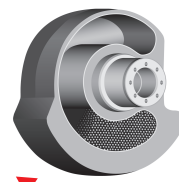
## Dual Amplitude, Dual Frequency Vibratory System (optional)

The dual amplitude, dual frequency vibratory system provides high amplitude or high frequency that is controlled from the operator's station.



- |                               |                                   |
|-------------------------------|-----------------------------------|
| 1 Oil Drain                   | 4 Eccentric Weight Housing        |
| 2 Exclusive Eccentric Weight  | 5 Oil Level Sight Gauge           |
| 3 Weight Drive Shaft to Motor | 6 Eccentric Weight Shaft Bearings |

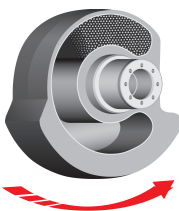
### High Amplitude



### Dual Amplitude Selection

Amplitude selection is determined by the position of the steel shot inside the hollow eccentric weight. The rotational direction of the weight shaft determines the amplitude level.

### Low Amplitude



### Dual Frequencies

Two frequencies of 53 Hz (3,200 vpm) and 70 Hz (4,200 vpm) provide customers with high amplitude and high frequency in one machine.

### Vibratory Control Switch

The vibratory control switch located on the console allows the operator to change vibratory settings on-the-run.

### Automatic Vibration Control

The vibratory system automatically starts when the propel lever is moved from neutral and stops when positioned in neutral.

## CB-434D XW

The CB-434D XW offers a wider drum for increased production and versatility.



### Wider Drum Width

The CB-434D XW incorporates a drum width of 1.7 m (67") providing increased lane coverage resulting in fewer passes.

### Operating Weight

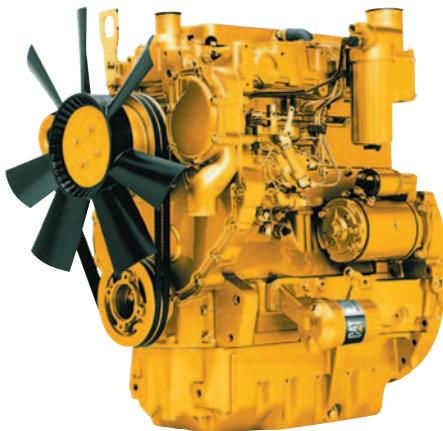
The operating weight of the CB-434D XW is 7700 kg (16,979 lb) providing a centrifugal force of 78 kN (17,550 lb).

### Vibratory Systems

The CB-434D XW can be equipped with the five amplitude or the dual amplitude, dual frequency vibratory systems. Both systems offer effective operation on thick or thin lift applications.

## Caterpillar® 3054C Diesel Engine

High-tech four-cylinder engine provides outstanding performance and reliability.



### Cat® 3054C Engine

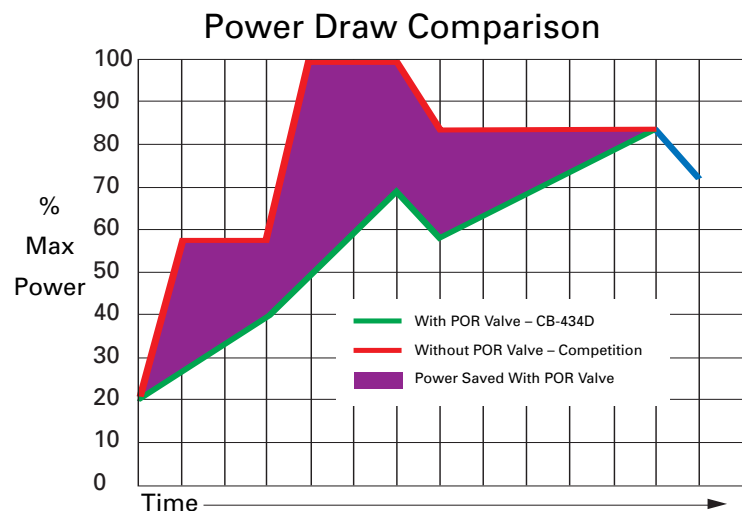
The 3054C engine produces 62 kW (83 hp) of power at 2,200 rpm providing fuel efficiency.

### Clean Operation

The 3054C meets U.S. EPA Tier 2 and E.U. Stage II engine emissions regulations.

### Balanced Power

The Pressure Override (POR) valve balances power demand in order to provide responsiveness.



## Operator's Station

*Ergonomically designed for maximum operator productivity and unmatched comfort.*



For FOPS protection to be effective, the operator must be seated under the canopy.

### **Comfortable Operating Environment**

The console and instrumentation move with the operator, staying in the same relative position to the operator.

### **Multi-Position Operator's Station**

The operating station has nine rotating and seven sliding positions, maximizing comfort.

### **Multi-Function Propel Handle**

The multi-function propel handle simplifies operation with the following controls: propel speed, vibrate on/off, water spray on/off, horn and optional drum offset.

### **Steering Console**

The entire console tilts for simple entrance and exit. A lockable vandal cover is provided for the console.

### **Comfortable and Durable Seat**

The seat has adjustable fore/aft positioning, suspension stiffness, and flip-up arm rests with a 76 mm (3") wide retractable seat belt.

### **Automatic Speed Control Dial**



### **Isolated Operator's Station**

The operator's station utilizes four, heavy-duty rubber mounts to reduce machine vibration to the operator.

### **Automatic Speed Control**

A speed control dial located on the operator's console simplifies operation by allowing the operator to preset the machine speed or impact spacing.

The speed control dial allows the operator to push the propel lever to the forward or reverse positions while repeating the desired speed or impact spacing.



# Water Spray System

*Corrosion resistant system and long life components for reliable operation.*



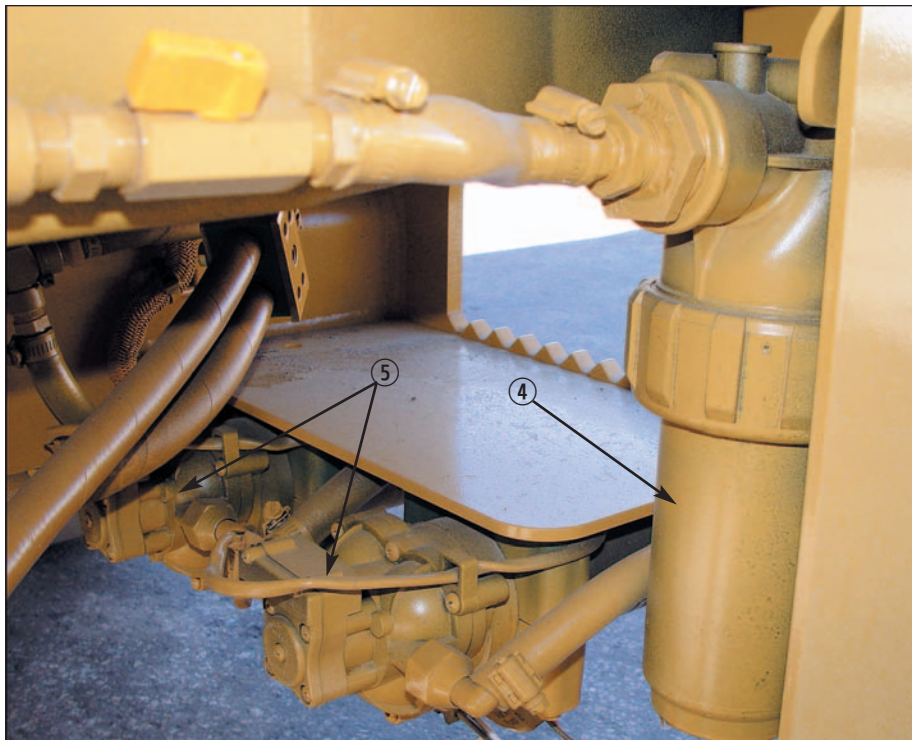
1 Single Fill Port

4 Water Filter

2 Spray Nozzle with Filter

5 Water Pumps

3 Water Distribution Mat



## High-Capacity Water Tank

The single, high-capacity, polyethylene water tank is enclosed within the machine frame providing extended operation.

## Two Pump System

An auto pump control setting selects water from one pump while traveling forward and water from the other pump while traveling rearward. The system provides uniform pump usage promoting a productive life for both pumps. A manual override control is also provided.

## Triple Water Filtration

Water filtration reduces machine downtime caused by system clogs. A mesh strainer is located in the water fill port. The water pump and spray nozzles, include screen filters that provide simple access and cleaning.

## Constant or Intermittent Spray Capability

The water spray system provides constant or intermittent spray settings. The intermittent spray setting provides longer operation between refills. The intermittent spray is infinitely variable allowing fine-tuning for any condition.

## On/Off Spray Control

The spray control is located on the propel lever providing simple operation.

## Quick-Release Spray Bars Covers

Quick-release spray bar covers shield the spray bars and nozzles from wind and sun, allowing the spray nozzles to provide consistent coverage across the drum surface.

## Freeze Protection Kit (Optional)

The freeze protection kit includes an in-line antifreeze bottle that allows the operator to pump antifreeze into the system.

## Reliability and Serviceability

*The CB-400 D-Series Asphalt Compactors provide exceptional reliability and serviceability that you've come to expect from Caterpillar.*



### **Vertical-Lift Hood Arrangement**

The vertical-lift hood allows routine service when parked close to other machines and structures, providing easy ground level access to routine maintenance points.

### **Easy Access and Removal**

The water filters and spray nozzles are easily removed by hand without the need for special tools.

### **Sealed Hitch Design**

The sealed hitch design simplifies overall machine maintenance.

### **Product Link Ready**

The Product Link System ensures maximum uptime and minimum repair costs by simplifying tracking of equipment fleets. The system provides automatic machine location and hour updates.

### **Quick-Connect Hydraulic Test Ports**

Quick-connect sampling ports simplify system diagnosis.

### **Oil-bath Lubrication**

Oil-bath lubrication reduces routine maintenance of eccentric weights to 3 year/3000 hour intervals.



## Engine

The Caterpillar® 3054C engine is a four cylinder diesel engine. The engine meets U.S. EPA Tier 2 and E.U. Stage II engine emission regulations.

Engine	Cat® 3054C	
<b>Gross Power</b>	<b>kW</b>	<b>hp</b>
SAE J1995	62	83
<b>Net Power</b>	<b>kW</b>	<b>hp</b>
ISO 9249	59	78
EEC 80/1269	59	78
SAE J1349	58	78
<b>Specifications</b>		
Bore	105 mm	4.12"
Stroke	127 mm	5.0"

- The power ratings apply at a rated speed of 2200 RPM when tested under the reference conditions for the specific standard.
- The net power advertised is the power available at the flywheel when the engine is equipped with alternator, air cleaner, muffler and fan at minimum speed.
- 12-volt electrical starting system with 80-amp alternator and one 12-volt, 950 cold cranking amp, maintenance-free battery.

## Transmission

Variable displacement piston pump supplies pressure flow to low-speed high torque hydraulic motors driving the front and rear drums. A single propel lever located on the control console provides smooth hydrostatic control of the machine's infinitely variable speeds in both forward and reverse. When the propel lever is positioned in reverse, a backup alarm emits an audible alarm.

### Speeds (forward and reverse):

Work/Travel 0-11.6 km/hr 0-7 mph

## Brakes

### Service Brake Features

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

### Secondary Brake Features

- Spring-applied/hydraulically released brake on front and rear drums. Actuated by switch on console or automatically when pressure is lost in brake circuit or when the engine is shut off. A manual release tool is included.

## Steering

Priority-demand hydraulic power-assist steering system provides smooth, firm machine handling. The automotive-type steering wheel and column are integral with the operator's swivel platform and allow steering from multiple positions.

### Minimum turning radius:

Inside drum edge		
CB-434D	3.5 m	11' 6"
CB-434D XW	3.4 m	11' 2"
Outside drum edge		
CB-434D	5.0 m	16' 5"
CB-434D XW	5.1 m	16' 9"

Steering angles 40°

## Frame

Fabricated from heavy gauge steel plate and rolled sections. The frame is joined at the articulation pivot, 50% of the machine is rear of the articulation pivot and 50% is in front of the pivot. The two sections are joined by two hardened steel pins that are supported by heavy-duty roller bearings. A vertical pin provides a  $\pm 40^\circ$  steering angle and the frame/yoke provides  $\pm 4^\circ$  oscillation for a smooth ride, uniform drum loading and no maintenance interval.

## Instrumentation

The instrument panel is located in front of the operator and contains the speedometer, vibrate tachometer, vibration mode selector, light switches, hour meter, alternator indicator light, fuel gauge, water tank gauge and warning lights. An audible alarm sounds and a warning light illuminates if abnormal conditions occur in engine oil pressure, engine coolant temperature or charge pressure. Operational lights are also positioned on the instrument panel. They illuminate if the vibratory system, drum spray system, neutral or parking brake are engaged.

Machine controls are also located to the operator's right on the control console. These controls include the start switch with cold-start aid, electric throttle, propel lever, speed selector switch, automatic speed control (ASC) dial, drum spray switch, vibration switch, horn and secondary brake switch. Electrical system fuses and relays are located on the side of the control console.

## Drum Spray System

The entire drum spray system is corrosion resistant and includes a large water tank with a single fill port and drain valve.

The system consists of two diaphragm pumps driven by electric motors. Only one pump operates at a time, supplying pressurized water to both sets of drum spray bars. The pump operation is controlled from operator's station. The system provides complete back-up capability controlled from the operator's station.

Spray can be set on continuous for maximum wetting action or intermittent for maximum duration between refills. The "Auto" selection pulls water from one pump traveling forward, from the other pump while traveling backward and automatically shuts off when the propel lever is in the neutral position. The spray nozzles on the drum can be easily removed for replacement or cleaning without the need for tools.

## Optional Equipment

- ROPS Cab
- Open Platform
- Dual Amplitude, Dual Frequency Vibratory System
- Offset Hitch
- Water Distribution Mats
- Cocoa Mats
- Water Spray Freeze Protection Kit
- Drum Covers
- Rooding Lights
- High Intensity Discharge Lights
- Warning Beacon
- External Mirrors
- Stainless Steel Water Spray Nozzles

## Service Refill Capacities

	Liters	Gallons
Fuel Tank	132	35
Cooling System	18	4.75
Engine Oil (w/filter)	9	2.4
Vibratory Bearing Lubrication	20	5.3
Hydraulic Tank*	50	13.2
Water (Spray) Tank	800	211

\* Figures describe tank at "full" level. Actual tank capacity is higher. Hydraulic/Charge oil is filtered by a 10 micron charge oil filter.

## Five Amplitude Vibratory System

### Frequency: 53 Hz (3,200 vpm)

Nominal Amplitude	CB-434D		CB-434D XW	
	mm	in	mm	in
High	0.68	0.027"	0.60	0.024"
Medium-high	0.58	0.023"	0.51	0.020"
Medium	0.47	0.019"	0.42	0.017"
Medium-low	0.36	0.014"	0.32	0.013"
Low	0.25	0.010"	0.22	0.009"

### Centrifugal Force Per Drum

	CB-434D		CB-434D XW	
	kN	lb	kN	lb
High	78	17,550	78	17,550
Medium-high	66	14,850	66	14,850
Medium	54	12,150	54	12,150
Medium-low	42	9,450	42	9,450
Low	29	6,525	29	6,525

## Dual Amplitude, Dual Frequency Vibratory System

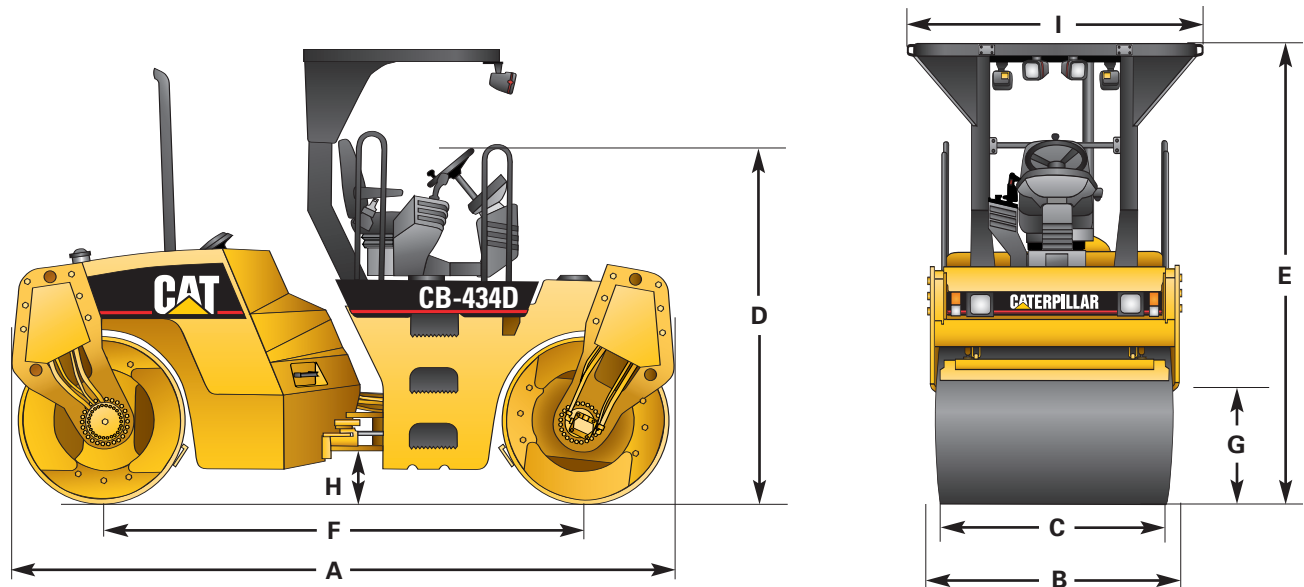
### Frequency: 53 Hz (3,200 vpm)

Nominal Amplitude	CB-434D		CB-434D XW	
	mm	in	mm	in
Nominal Amplitude	0.69	0.027"	0.61	0.024"
Centrifugal Force	77 kN	17,310 lb	77 kN	17,310 lb

### Frequency: 70 Hz (4,200 vpm)

Nominal Amplitude	CB-434D		CB-434D XW	
	mm	in	mm	in
Nominal Amplitude	0.25	0.010"	0.22	0.009"
Centrifugal Force	48 kN	10,800 lb	48 kN	10,800 lb

# Dimensions and Weights



Dimensions	CB-434D		CB-434D XW	
Length (A)	4.20 m	13' 9"	4.20 m	13' 9"
Body width (B)	1.67 m	5' 6"	1.87 m	6' 1"
Drum width (C)	1.50 m	59"	1.7 m	67"
Drum shell thickness	18 mm	0.71"	18 mm	0.71"
Drum diameter	1.3 m	4' 3"	1.3 m	4' 3"
Height at steering wheel (D)	2.26 m	7' 5"	2.26 m	7' 5"
Height at ROPS/FOPS (E)	3.01 m	9' 11"	3.01 m	9' 11"
Wheelbase (F)	3.10 m	10' 2"	3.10 m	10' 2"
Curb clearance (G)	720 mm	28"	720 mm	28"
Ground clearance (H)	255 mm	10"	255 mm	10"
Width ROPS/FOPS and Canopy (I)	1.94 m	6' 4"	1.94 m	6' 4"

## Weights

<b>Operating Weight</b>				
with ROPS	7500 kg	16,535 lb	7700 kg	16,975 lb
without ROPS	7150 kg	15,765 lb	7350 kg	16,204 lb
with Cab	7380 kg	16,270 lb	7580 kg	16,710 lb
<b>Shipping Weight</b>				
with ROPS	6620 kg	14,595 lb	6820 kg	15,035 lb
without ROPS	6270 kg	13,823 lb	6470 kg	14,265 lb
with Cab	6500 kg	14,330 lb	6700 kg	14,770 lb
Static Linear Load (at drum)	25 kg/cm	138 lb/in	23 kg/cm	127 lb/in

\* Standard operating weights include lubricants, coolant, 75 kg (165 lb) operator, 1/2 full fuel tank, full hydraulic system and 1/2 full water tank.

# Caterpillar offers a comprehensive line of vibratory asphalt compactors.

Contact your local Caterpillar dealer to learn more about the complete line of Caterpillar Paving Products.

12 Ton



## CB-634D

Operating Weight (with ROPS)	12 800 kg	28,160 lb
Drum Width	2.13 m	84"
Frequency	44 Hz	2,640 vpm
Centrifugal Force		
Maximum	159 kN	35,745 lb
Minimum	58 kN	13,039 lb
Gross Power	108 kW	145 hp

12 Ton



## CB-564D

Operating Weight (with ROPS)	12 600 kg	27,783 lb
Drum Width	2.13 m	84"
Frequency	42/63 Hz	2,520/3,800 vpm
Centrifugal Force		
Maximum	112.6 kN	25,208 lb
Minimum	76.7 kN	17,22 lb
Gross Power	97 kW	130 hp

11 Ton



## CB-534D XW

Operating Weight (with ROPS)	11 300 kg	24,860 lb
Drum Width	2.0 m	79"
Frequency	42/63 Hz	2,520/3,800 vpm
Centrifugal Force		
Maximum	112.6 kN	25,208 lb
Minimum	35 kN	7,922 lb
Gross Power	97 kW	130 hp

11 Ton



## CB-534D

Operating Weight (with ROPS)	10 380 kg	22,836 lb
Drum Width	1.7 m	67"
Frequency	42/63 Hz	2,520/3,800 vpm
Centrifugal Force		
Maximum	112.6 kN	25,208 lb
Minimum	35 kN	7,922 lb
Gross Power	97 kW	130 hp

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Replaces QEHQ1025

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