

CB434D
CB434D XW
Vibratory Asphalt
Compactors



Cat® 3054C Diesel Engine

Gross Power (SAE J1995) at 2200 rpm 62 kW/84 hp

Drum Width

CB434D 1500 mm

CB434D XW 1700 mm

Operating Weight (with ROPS cab)

CB434D 7380 kg

CB434D XW 7580 kg

Productivity and Reliability in a Durable Package

The CB400 D-Series Asphalt Compactors offer compaction performance, application versatility and operator comfort to maximize productivity while providing exceptional product quality.

Vibratory System

Pod-style eccentric weights with more amplitude selections ensure peak compaction performance and minimal service. High dynamic force helps achieve density in the fewest number of passes. The standard dual amplitude system provides excellent versatility for the contractor with a flip of the switch from the operator's console. **pg. 5**

Engine

Cat 3054C diesel engine delivers 62 kW (84 hp) and is built for performance and reliability without sacrificing fuel economy. The cooling system delivers fresh air from above the engine for clean and efficient operation. **pg. 4**

Water Spray System

The large capacity 800 liter water tank provides increased working time and a single point to fill and drain. Caterpillar's exclusive dual pump spray system provides the operator an efficient, easy access drum watering system. The tank contains triple water filtration and infinitely variable spray settings are additional benefits of the system. An optional overnight freeze protection kit is also available. **pg. 9**

CB434D XW

The CB434D XW asphalt compactor includes a 1.70 m drum for increased lane coverage. This versatile machine can be equipped with the optional 5-Amplitude vibratory system or the standard dual amplitude system. **pg. 4**

Performance and reliability you can depend on.

Based upon the industry-proven reputation of the Caterpillar® Asphalt Soil Compactors, the CB400 D-Series 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 CB400 D-Series Asphalt Compactors will provide maximum productivity.



Visibility

The one-piece hood design and vertical folded drum supports provide excellent operator visibility to important areas of the machine including drum edges, drum surfaces, and overall visibility around the machine. Angled supports provide high clearance and visibility for work against barriers and walls.

pg. 8

Operator's Station

The operator station features excellent operator comfort and visibility. A tilting steering column, propel lever wrist rest, and conveniently located and grouped control switches and gauges enhance operator productivity. Heavy-duty isolation mounts provide a smooth ride. Machines with the ROPS/FOPS platform include 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. **pg. 6**

Serviceability

The one-piece fiberglass hood opens upward and rearward to allow access to the engine and daily maintenance points. 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.

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 year/3000 hour keeps maintenance to a minimum and maximizes production. The articulation hitch area features sealed-for-life bearings that reduce the need for maintenance. **pg. 10**



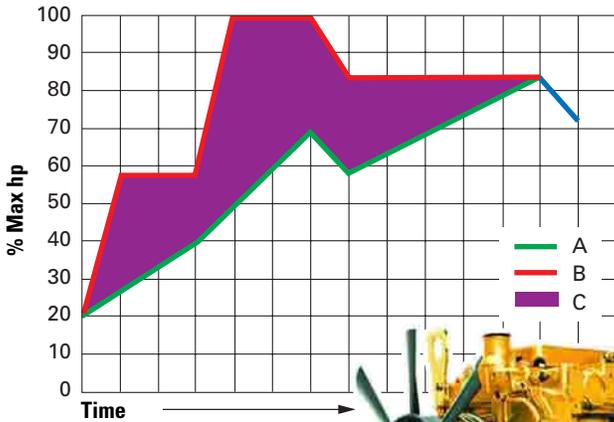
Comfort and serviceability you deserve.

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 machine production.

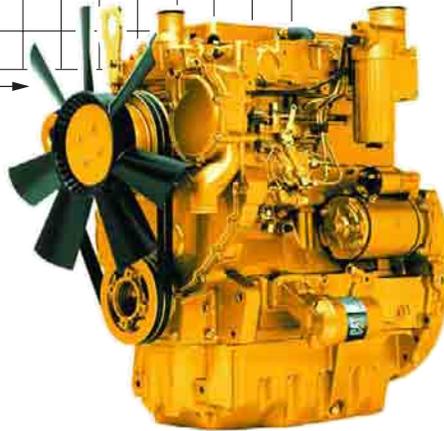
Caterpillar 3054C Diesel Engine

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

Horsepower Draw Comparison



- A** With POR Valve - CB434D
- B** Without POR Valve - Competition
- C** Horsepower Saved With POR Valve



Direct-injection. Direct-injection of fuel for maximum efficiency.

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

Fuel efficiency. The 3054C engine produces a gross power of 62 kW (84 hp) at 2200 rpm providing excellent fuel efficiency.

Emission requirements. This engine meets EU directive 97/68/EC Stage II emission requirements.

Propel and Vibratory Circuits. The Propel and Vibratory Circuits use horsepower efficiently, but not at the sacrifice of performance.

POR valve. It balances horsepower demands.

Responsive vibratory system. Provides plenty of power and a responsive vibratory system when starting and stopping the machine on each pass.

CB434D XW

The CB434D XW offers a wider drum for increased production and versatility.



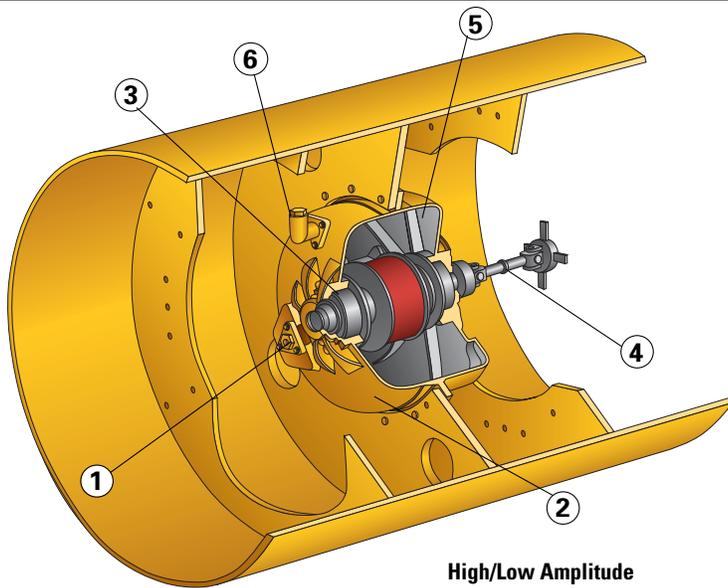
Wider drum width. The CB434D XW incorporates a drum width of 1.70 m providing increased lane coverage resulting in fewer passes.

Operating weight. The operating weight of the CB434D XW equipped with ROPS cab is 7580 kg providing a centrifugal force of 78 kN.

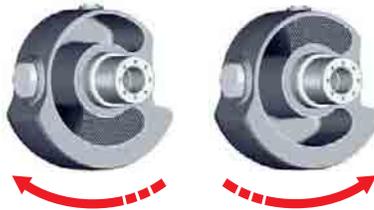
Vibratory systems. The CB434D XW can be equipped with the optional 5-Amplitude vibratory system or the standard dual amplitude vibratory system.

Standard Two-Amplitude Vibratory System

Reliable two-amplitude selection and innovative design ensure precise performance.



High/Low Amplitude



Vibratory frequency. Two amplitudes and vibratory frequency of 53 Hz for high compaction results. Vibratory amplitude is selected from the control console.

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

Vibration start-up and shut-off. Automatic vibration start-up and shut-off helps produce smooth, flawless mats and also has a manual control for start-and-stop work.

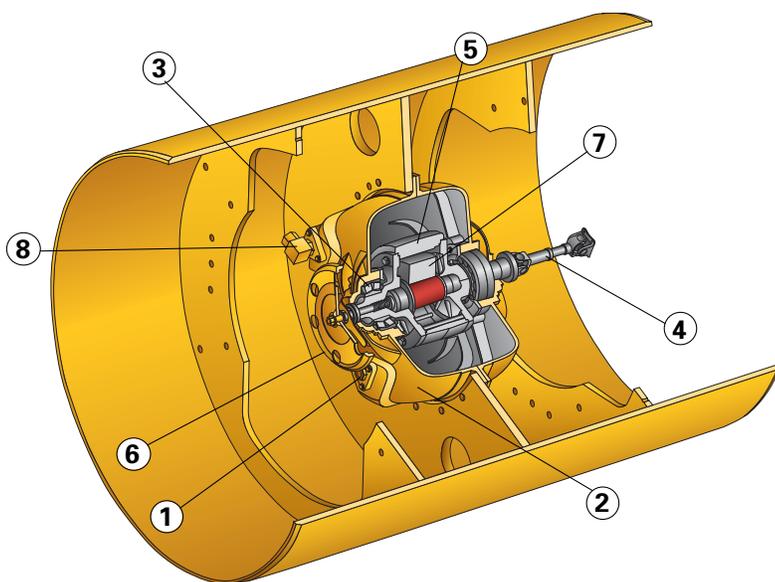
Clean oil and long bearing life. Moving parts are separated from lubricating oil helping to keep oil clean and ensuring long bearing life. Bearing oil has a 3 year/3000 hour service interval.

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

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

Optional Five-Amplitude Vibratory System

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



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

Amplitude selections. Five amplitude selections for working more efficiently in a wider range of applications.

Vibratory frequency. Vibratory frequency of 53 Hz for high compaction results.

Weight locking system. Positive weight locking system ensures position of variable amplitude setting.

Eccentric weight and drum rotation. Automatic matching of eccentric weight and drum rotation direction are good for mat quality.

Vibration start-up and shut-off. Automatic vibration start-up and shut-off helps produce smooth, flawless mats and also has a manual control for start-and-stop work.

Clean oil and long bearing life. Moving parts are separated from lubricating oil helping to keep oil clean and ensuring long bearing life. Bearing oil has a 3 year/3000 hour service interval.

Operator's Station

Ergonomically designed for maximum operator productivity while offering excellent visibility and unmatched comfort.



Seat. The comfortable and durable seat has adjustable fore/aft position, suspension stiffness and flip-up arm rests with a 76 mm wide retractable seat belt.

Operator's station. The isolated operator's station with four heavy-duty rubber mounts limits machine vibration transmitted to the operator's station. Rubber floor mat provides sure footing and helps further isolate the operator from machine vibration and noise.

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

Instrument panel. Machine gauges are located on the adjustable front steering column for easy reference during machine operation. The instrument panel contains the fuel gauge, vibrations per minute (VPM) meter (optional) and a nine-light LED fault indication panel. Gauges and controls move with console keeping them in same relative position to the operator.

Indication panel. Fault indication panel is a three-level warning system to alert the operator to abnormal machine conditions with a visual warning and action alarm.

Propel handle. The multifunction ergonomic propel handle simplifies operation with the following controls: propel speed, vibrate on/off, water spray on/off, horn and drum offset (optional).

ASC control. Standard ASC control greatly simplifies operation by allowing the operator to preset machine speed or impact spacing. The operator can easily match travel speed with vibrations per minute, ensuring consistent and repeatable rolling patterns with effective compaction results.

1 Automatic Speed Control Dial



Cab option. The optional cab is a spacious and comfortable work environment with more interior room, better ergonomics and a dramatic reduction in interior sound levels.

Windshield. Full-length glass windshield provides exceptional visibility to the drums.

Wipers. Windshield wipers on front and rear windows allow clear vision in adverse conditions.

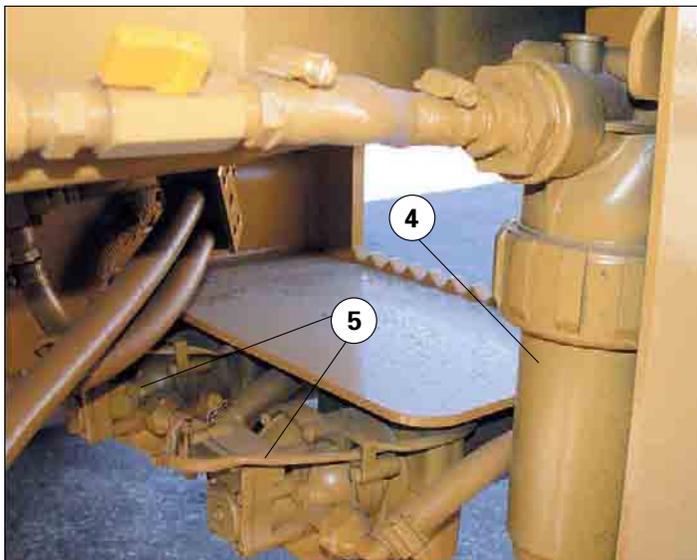
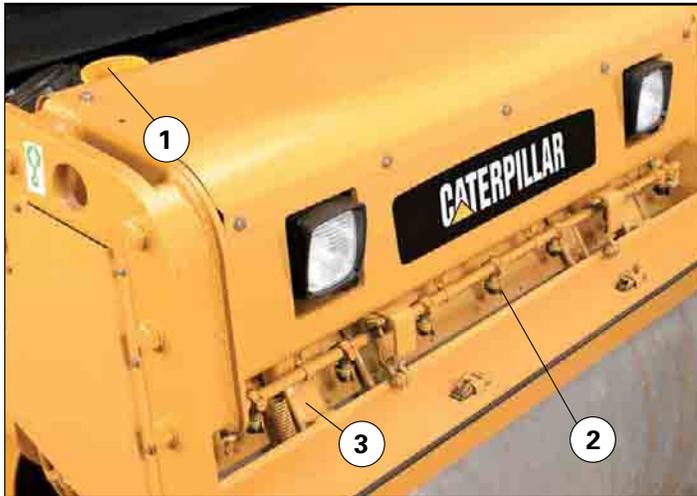
Working lights. Front and rear working lights are included.

Climate control. The climate control with standard heater and defroster for maximum operator comfort. Optional air conditioning helps keep the cab cool and comfortable.



Water Spray System

Corrosion-proof system and long-life components for reliable operation.



- 1 Single Water Fill Port
- 2 Spray Nozzle with Filter
- 3 Water Distribution Mat
- 4 Water Filter
- 5 Water Pumps

Back-up water spray pump. Complete back-up system controlled from the operator's station.

Spray capabilities. Constant or intermittent spray capabilities for longer operation between fill-ups. The intermittent spray is infinitely variable allowing fine-tuning for any condition.

Water nozzles. High flow water nozzles deliver more water to the drum for unusually dry conditions.

Ground level service. Water distribution mats and cocoa mats feature ground level service and are available as options.

Water filtration. Triple water filtration reduces machine downtime caused by system clogs.

Spray bar cover. Quick-release spray bar cover protects spray from wind (shown open).

Spray control. On/off spray control is provided on the propel lever to simplify operation.

Pump system. Two pump system but only one pump operates at a time, doubling pump life in terms of machine hours.

Pump control setting. Auto pump control setting selects water from one pump while traveling forward and water from the other pump while traveling rearward. The pumps will turn off when the propel lever is in neutral. The system maintains even pump usage for uniform life. Manual override control is provided.

Water pumps and in-line filters. Water pumps and in-line filters are conveniently grouped and located in the hitch area for easy service.

Long-life water pumps. Long-life water pumps are self priming and pressure regulating to provide optimum spray and flow.

Polyethylene tank. One single high-capacity polyethylene tank is enclosed within the machine frame, and provides extended operation, a single fill point and drain port.

Antifreeze. Overnight Freeze Kit (optional) includes an in-line antifreeze bottle that allows the operator to pump antifreeze into the system (not available with cab).

Reliability and Serviceability

The CB400 D-Series Asphalt Compactors provide exceptional reliability and serviceability that you've come to expect from Caterpillar.



Hood arrangement. Vertical-lift hood arrangement allows routine service when parked close to other machines and structures.

Ground level servicing. The ground level servicing simplifies routine maintenance with hydraulic components designed for easy access.

Machine maintenance. Sealed-for-life hitch simplifies overall machine maintenance.

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

Spray nozzles and filters. Water spray nozzles and filters are easily removed by hand without the need of special tools.

Easy access. Water system pumps, filters and tank drain are centrally located at ground level for easy access.

Product Link. Machine is Product Link ready. The Caterpillar Product Link System (CPLS) ensures maximum uptime and minimum repair costs by simplifying tracking of equipment fleets. Provides automatic machine location and hour updates. Can be obtained through your local Caterpillar dealer.

Self-adjusting scrapers. Self-adjusting scrapers are designed for even wear without the need for maintenance. To reduce scraper wear, the scrapers are located for easy ground level access to replace the blades. Scrapers flip up while roading the machine.

Remote mounted fittings. Remote mounted fittings simplify draining hydraulic and fuel tanks.

Hydraulic test ports. Quick-connect hydraulic test ports simplify system diagnosis.

Quick start post. Remote mounted quick start post for easy jump starts.

Side panels. Removable side panels on the engine compartment allows easy access to hydraulic components.

Engine

Four-stroke cycle, four cylinder Caterpillar 3054C diesel engine meets EU directive 97/68/EC Stage II emission requirements.

Gross Power	at 2200 rpm
SAE J1995	62 kW/84 hp

Net Power	
EEC 80/1269	59 kW/80 hp
ISO 9249	59 kW/80 hp

Bore	105 mm
Stroke	127 mm
Displacement	4.4 liters

- All engine horsepower (hp) are metric including front page.
- Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler and alternator.
- Derating is not required up to an altitude of 2134 m.
- Dual-element, dry-type air cleaner with visual restriction indicator.
- 12-volt electrical starting system with 80 amp alternator and one 12-volt, 950 cold cranking amp maintenance-free Cat battery.
- Engine throttle is two-position electric control.

Transmission

Variable displacement piston pump supplies pressure flow to single speed hydraulic motors driving the front and rear drums through planetary gearboxes. 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.

Speeds

Forward and reverse	0-11.6 km/h
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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	
CB434D	3500 mm
CB434D XW	3400 mm

Outside drum edge	
CB434D	5000 mm
CB434D XW	5100 mm

Steering angle

(each direction)	$\pm 40^\circ$
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Hydraulic system

One 76 mm bore, double-acting cylinders powered by a gear-type pump. Output at 2200 rpm 51 l/min

Brakes

Service brake features

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

Secondary and parking 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 engine is shut off. A manual release tool is included.

* All machines sold within European Union are equipped with a brake release tool which allows the manual release of the secondary brake system for towing the machine.

Braking system meets EN 500.

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 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/parking brake switch. Electrical system fuses and relays are located on the side of the control console.

Drum Spray System

Entire drum spray system is corrosion-proof 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. Pump operation is controlled from operator's station. System provides complete back-up capability controlled from operator's station.

Spray can be set on continuous for maximum wetting action or intermittent for maximum duration between fill-ups. The "Auto" selection pulls water from one pump traveling forward and from the other pump while traveling backward. The water spray system automatically shuts off when the machine is in neutral. Nine spray nozzles per drum are easily removed for replacement or cleaning without the need for tools.

Water capacity	800 Liters
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Vibratory System

Drum width		
CB434D	1500 mm	
CB434D XW	1700 mm	
Drum diameter		
1100 mm		
Drum shell thickness		
17 mm		
Weight at front drum (ROPS cab)		
CB434D	3690 kg	
CB434D XW	3790 kg	
Weight at rear drum (ROPS cab)		
CB434D	3690 kg	
CB434D XW	3790 kg	
Eccentric weight drive		
Hydraulic direct, auto reversing		
Weight distribution front/rear		50/50%
Vibratory frequency		53 Hz
Nominal amplitude		
CB434D/CB434D XW		
		mm
Amplitudes	Two	Five
High	0.69/0.62	0.68/0.61
Medium-high	–	0.58/0.52
Medium	–	0.47/0.42
Medium-low	–	0.36/0.32
Low	0.33/0.29	0.25/0.22
Centrifugal force per drum		kN
Amplitudes	Two	Five
High	79.4	78
Medium-high	–	66
Medium	–	54
Medium-low	–	42
Low	38.2	29

Operating and Shipping Weights

Weights shown are approximate and include lubricants, coolant, 80 kg operator, full fuel tank, full hydraulic system and half-full water tanks.

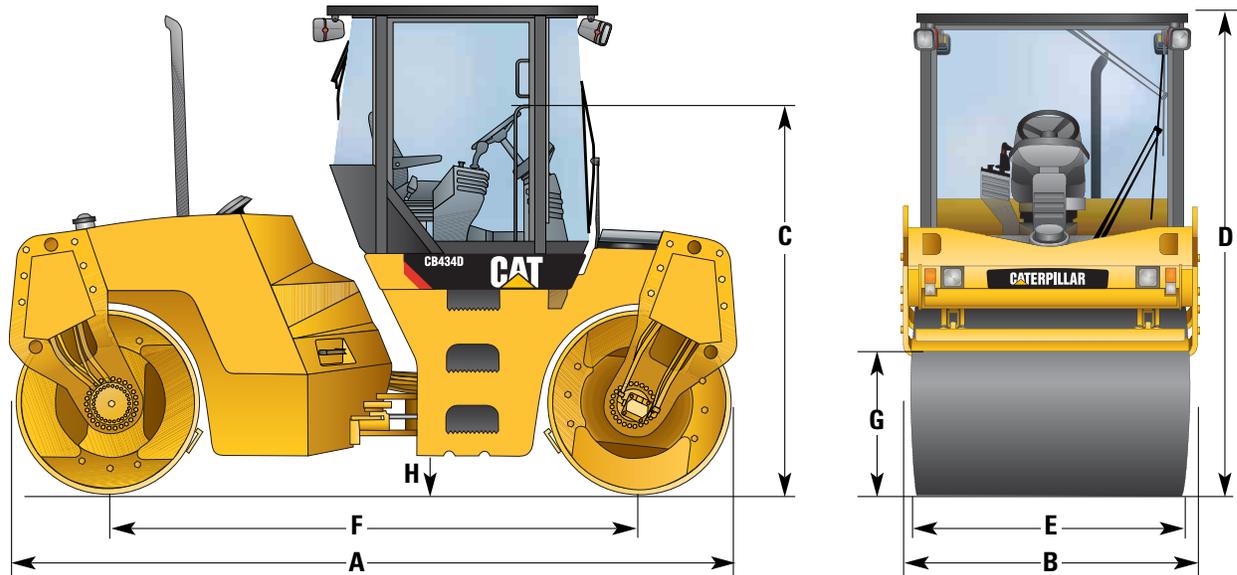
	CB434D	CB434D XW
Operating weight		
with ROPS cab	7380 kg	7580 kg
with ROPS	7500 kg	7700 kg
without ROPS	7150 kg	7350 kg
Shipping weight		
with ROPS cab	6500 kg	6700 kg
with ROPS	6620 kg	6820 kg
without ROPS	6270 kg	6470 kg
Average static linear load (at drum)		
with ROPS cab	25.2 kg/cm	
with ROPS	24.7 kg/cm	
without ROPS	23.5 kg/cm	

Service Refill Capacities

	Liters
Fuel tank	132
Cooling system	18
Engine oil with filter	9
Vibratory bearing lubrication	20
Hydraulic tank	50
Filtration system	10 micron absolute
Water (spray) tank	800

Dimensions

All dimensions are approximate.



	mm		mm
A Length	4200	F Wheelbase	3100
B Width		G Curb Clearance (vertical)	720
CB434D	1670	H Ground Clearance	255
CB434D XW	1870	Minimum turning radius:	
C Height at steering wheel	2265	Inside drum edge	
D Height at top of ROPS	3010	CB434D	3500
Height at top of ROPS cab	3055	CB434D XW	3400
E Drum width		Outside drum edge	
CB434D	1500	CB434D	5000
CB434D XW	1700	CB434D XW	5100

Optional Equipment

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

Roll Over Protective Structure/ Falling Object Protective Structure (ROPS/FOPS) Canopy	Cocoa Mats	High Intensity Discharge Lights
ROPS/FOPS Cab	Water Distribution Mats	Drum Covers
Sun Visor	Rotating Amber Beacon	Offset Hitch
Rear View Mirrors	Water Spray System Freeze Protection Kit	Rear-facing Mirrors
		Five Amplitude Vibratory System

CB434D and CB434D XW Vibratory Asphalt 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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