



# Cat<sup>®</sup> CS78B

## Smooth Drum Vibratory Soil Compactor

*The Cat<sup>®</sup> CS78B features a smooth drum and is ideally suited for granular soil applications or cohesive soil applications with the use of an optional padfoot shell kit.*

### Comfortable and Ergonomic Operator Station

- Features pivoting seat with integrated multifunction LCD display and control console.
- Outstanding visibility to the front and rear of machine.
- Low sound levels and vibration for greater operator comfort and productivity.

### Rear Vision Camera

- The rear vision camera enhances visibility for more complete operator control and safety.

### Exceptional Propel System

- Built around the exclusive Cat<sup>®</sup> dual pump propel system, two pumps provide separate dedicated flow to drum drive motor and rear axle motor for exceptional gradeability and traction in forward and reverse.
- Electronic propel control provides more precise machine control.

### Virtually Maintenance Free

- Maintenance-free hitch bearings.
- Extended maintenance intervals for vibratory system and hydraulic system, providing more uptime and lower maintenance costs.

### Enhanced Compaction Performance

- More weight at the drum and greater amplitude.
- Automated speed control and vibratory system functions make it easy to ensure consistent, high quality compaction.

### Technologies that Enhance Quality and Productivity

- Exclusive semi-autonomous Command for Compaction technology automates compaction to offer complete process control and help promote more uniform results.
- Measurement and documentation technologies help the operator determine when compaction has been completed to specification for greater productivity and uniform compaction quality.
- Accelerometer-based (CMV) and exclusive Machine Drive Power (MDP) measurement technologies available.



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## Technical Specifications

### Engine - Power Train

Engine Model	Cat® C4.4	
European Emissions	EU Stage V	
Gross Power ISO 14396	129.4 kW	173.5 hp
Gross Power SAE J1995	130.4 kW	174.9 hp
Net Power ISO 9249*	108.7 kW	145.8 hp
Net Power SAE J1349*	108.2 kW	145.1 hp
Displacement	4.4 L	268.5 in <sup>3</sup>
Stroke	127 mm	5 in
Bore	105 mm	4.1 in
Max. Travel Speed (Forward or Reverse)	11.4 km/h	7 mph
Theoretical Gradeability, no vibration**	53 %	

### Vibratory System Specifications

Frequency		
Standard	28 Hz	1680 vpm
During Eco-mode Operation	25.5 Hz	1527 vpm
Optional Variable Frequency	23.3-28 Hz	1400-1680 vpm
Nominal Amplitude @ 28 Hz (1680 vpm)		
High	2.1 mm	0.083 in
Low	0.98 mm	0.039 in
Centrifugal Force @ 28 Hz (1680 vpm)		
Maximum	335 kN	75,234 lb
Minimum	156 kN	35,153 lb
Static Linear Load		
w/ ROPS/FOPS cab	63.0 kg/cm	352.8 lbs/in
VM Class at High Amplitude	VM5	

### Weights

Operating Weight w/ ROPS/FOPS cab***	18 888 kg	41,641 lb
w/ Oval Padfoot Shell Kit	19 178 kg	42,280 lb
w/ Square Padfoot Shell Kit	19 337 kg	42,631 lb
Weight at Drum w/ ROPS/FOPS cab	13 443 kg	29,637 lb
w/ Oval Padfoot Shell Kit	13 127 kg	28,940 lb
w/ Square Padfoot Shell Kit	13 286 kg	29,291 lb

### Service Refill Capacities

Fuel Tank, total capacity	332 L	88 gal
Diesel Exhaust Fuel refill capacity	19 L	5 gal
Cooling System	28.2 L	7.5 gal
Engine Oil w/ Filter	11.6 L	3.1 gal
Eccentric Weight Housings (combined)	26 L	6.9 gal
Axle and Final Drives	18 L	4.8 gal
Hydraulic Tank (service refill)	50 L	13.2 gal

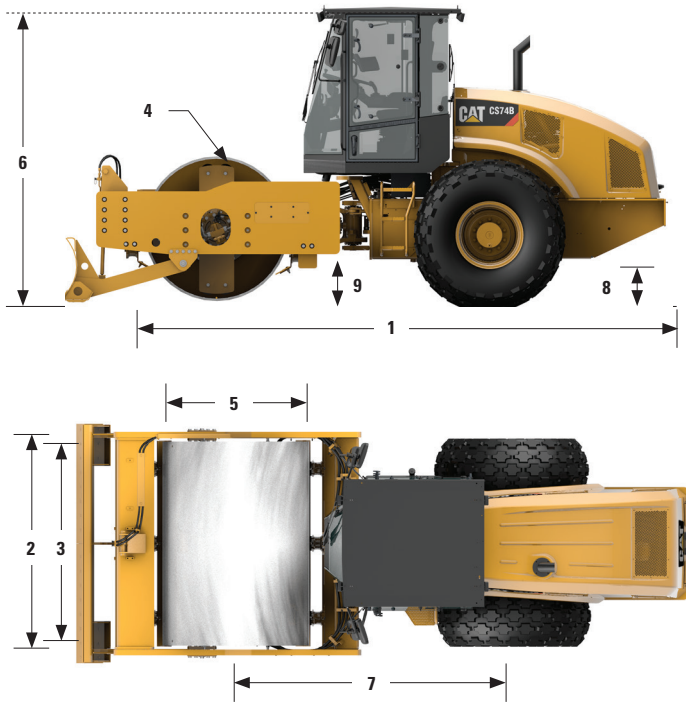
\* Net power advertised is the power available at the engine flywheel when equipped with a fan at maximum speed, air cleaner, clean emissions module, and alternator.

\*\* Actual gradeability may vary based on site conditions and machine configuration. Refer to the Operation and Maintenance Manual for more information.

\*\*\* Standard operating weight considers full fuel tank, 75 kg operator, flotation tires, smooth drum, and cab with A/C.

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 0.8 kg of refrigerant which has a CO<sub>2</sub> equivalent 1.144 metric tonne.

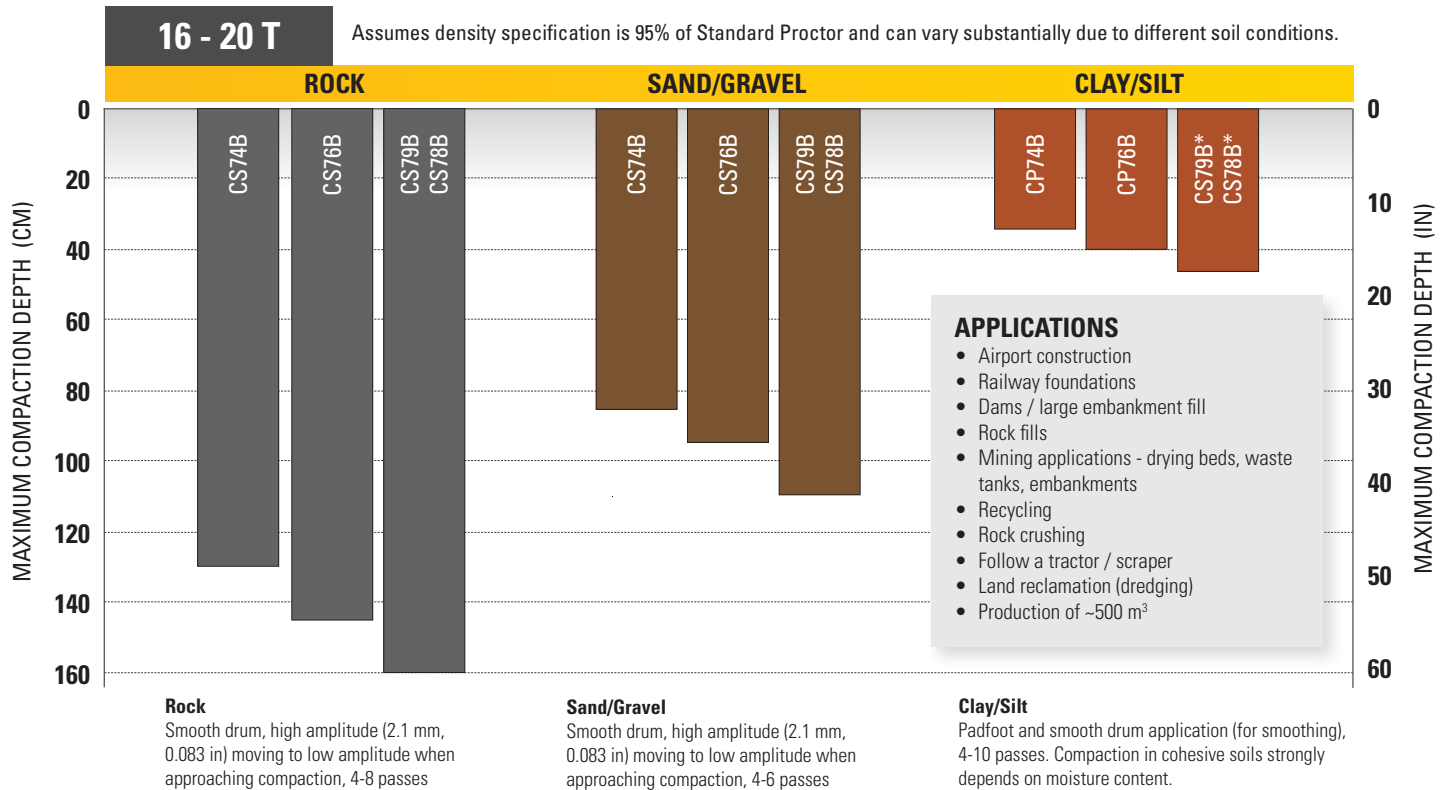
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Dimensions			
1	Overall Length	6.1 m	20.1 ft
2	Overall Width	2.5 m	8.1 ft
3	Drum Width	2134 mm	84 in
4	Drum Shell Thickness	40 mm	1.6 in
5	Drum Diameter	1535 mm	60.4 in
6	Overall Height	3.1 m	10.1 ft
7	Wheelbase	2.9 m	9.5 ft
8	Ground Clearance	434 mm	17.1 in
9	Curb Clearance	533 mm	21.0 in
	Inside Turning Radius	3.7 m	12.1 ft
	Hitch Articulation Angle		34°
	Hitch Oscillation Angle		15°

Optional Padfoot Shell Kit Specifications			
	Number of Pads		120
	Pad Height, oval pads	89.8 mm	3.5 in
	Pad Face Area, oval pads	63.5 cm <sup>2</sup>	9.8 in <sup>2</sup>
	Pad Height, square pads	89.8 mm	3.5 in
	Pad Face Area, square pads	105.7 cm <sup>2</sup>	16.4 in <sup>2</sup>
	Number of Chevrons		16

## Vibratory Soil Compactor Selection Guide



Size: Less than 50 mm (2 in) diameter

\* Smooth drum model equipped with padfoot shell kit

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## Standard and Optional Equipment

Standard and optional equipment may vary. Consult your Cat dealer for details.

	Standard	Optional		Standard	Optional
<b>OPERATOR ENVIRONMENT</b>			<b>POWER TRAIN</b>		
ROPS/FOPS Cab with Climate Control, External Rear View Mirrors	✓		Cat C4.4 Diesel Engine	✓	
Cloth Adjustable Pivoting Seat with Integrated Console and LCD Display	✓		Air Cleaner, Dual Element	✓	
Adjustable Tilting Steering Column with Integrated Cup Holders	✓		Three-Speed Throttle Switch, Eco-mode and Automatic Speed Control	✓	
Rear Vision Camera with Color Touchscreen Display	✓		Dual Propel Pumps; One for Drum Drive, One for Rear Axle	✓	
High Visibility Orange 50 mm (2 in) Seat Belt	✓		Fuel Filter, Water Separator, Priming Pump, Water Indicator	✓	
12-volt Power Outlet	✓		Tilting Radiator/Hydraulic Oil Cooler	✓	
Horn, Backup Alarm	✓		Dual Braking System	✓	
Internal Rear View Mirror		✓	Two-speed Hydrostatic Transmission	✓	
Sun Visor		✓	Transmission Guard		✓
Cab Internal Roll-down Sun Screen		✓	<b>ELECTRICAL</b>		
High Visibility Orange 76 mm (3 in) Seat Belt		✓	24 volt Electrical System	✓	
<b>VIBRATORY SYSTEM</b>			100 ampere Alternator	✓	
Smooth Drum	✓		750 Cold-cranking Amps Battery Capacity	✓	
Dual Amplitude, Single Frequency	✓		<b>OTHER</b>		
Dual Pod-Style Eccentric Weight Housings	✓		Product Link™	✓	
Auto-vibe Function	✓		Sight Gauges for Hydraulic Oil Level and Radiator Coolant Level	✓	
Front Adjustable Steel Scraper	✓		S-O-S <sup>SM</sup> Sampling Valves: Engine Oil, Hydraulic Oil and Coolant	✓	
Padfoot Shell Kit (oval or square pads available)		✓	Machine tie downs - front and rear (meet ISO 15818)	✓	
Variable Frequency		✓	Recording Module		✓
Dual Adjustable Steel Scrapers		✓	Factory Filled Bio Hydraulic Oil		✓
Dual Adjustable Polyurethane Scrapers		✓	Fast Fill Fuel Tank		✓
<b>TECHNOLOGY SOLUTIONS</b>			Upgraded Halogen Light Package		✓
Measure - Machine Drive Power and/or CMV		✓	Upgraded LED Light Package		✓
Map - SBAS GNSS Mapping		✓	Amber Rotating Beacon		✓
Connect - Cloud and Machine Connectivity		✓	Fuel Fill Access Door		✓
Command for Compaction		✓			

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at [www.cat.com](http://www.cat.com)

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Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment. See your Cat dealer for available options.

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