



816

Landfill Compactor

Technical Specifications

Configurations and features may vary by region. Please consult your Cat® dealer for availability in your area.

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816 Landfill Compactor Specifications

Engine

Engine Model	Cat C7.1	
Emissions	U.S. EPA Tier 4 Final/ EU Stage V/Japan 2014/ Korea Tier 5	
Rated Speed	2,200 rpm	
Net Power (SAE J1349:2011)	186 kW	249 hp
Net Power (ISO 9249:2007)	186 kW	249 hp
Gross Power (SAE J1995:2014)	212 kW	284 hp
Engine Power (ISO 14396:2002)	205 kW	275 hp
Peak Torque @ 1400 rpm	1223 N·m	902 lbf-ft
Torque Rise	52%	

- Net power available at the flywheel when the engine is equipped with fan, air cleaner, aftertreatment, and alternator with engine speed at 2,200 rpm.

Emissions	Brazil MAR-1 and China Nonroad Stage III, equivalent to U.S. EPA Tier 3/EU Stage IIIA	
Rated Speed	2,200 rpm	
Net Power (SAE J1349:2011)	186 kW	249 hp
Net Power (ISO 9249:2007)	186 kW	249 hp
Gross Power (SAE J1995:2014)	213 kW	286 hp
Engine Power (ISO 14396:2002)	205 kW	275 hp
Peak Torque @ 1400 rpm	1016 N·m	749 lbf-ft
Torque Rise	26%	

- Net power available at the flywheel when the engine is equipped with fan, air cleaner, muffler, and alternator with engine speed at 2,200 rpm.

Bore	105 mm	4.1 in
Stroke	135 mm	5.3 in
Displacement	7.01 L	427.8 in ³
High Idle Speed	2,270 rpm	
Low Idle Speed	800 rpm	
Maximum Altitude without Derating	3000 m	9,842.5 ft

Operating Specifications

Operating Weight (Tier 4 Final/Stage V)	26 052 kg	57,345 lb
Operating Weight (Tier 3/Stage IIIA equivalent)	25 761 kg	56,793 lb

Transmission

Transmission Type	Cat Planetary Power Shift	
Forward – First	5.4 km/h	3.4 mph
Forward – Second	8.5 km/h	5.3 mph
Reverse – First	6.0 km/h	3.7 mph
Reverse – Second	8.8 km/h	5.5 mph

Hydraulic System Lift/Tilt

Lift/Tilt System – Circuit	Pilot Operated LS Valve with EH	
Lift/Tilt System	Variable Displacement Piston	
Max Flow at 2,200 rpm	89 L/min	23.5 gal/min
Relief Valve Setting – Lift/Tilt	22 000 kPa	3,190 psi
Cylinders, Double Acting: Lift, Bore, Stroke	120 mm × 915 mm	4.7 in × 36.0 in
Pilot System	Open Center, Fixed Displacement Gear	
Pilot Relief Valve Setting	21 000 kPa	3,046 psi

Hydraulic System - Steering

Steering System – Circuit	Pilot, Load Sensing	
Steering System – Pump	Variable Displacement Piston	
Max Flow @ 2,200 rpm	147 L/min	38.8 gal/min
Relief Valve Setting – Steering	27 600 kPa	4,003 psi
Total Steering Angle	84°	
Steering Cycle Time (high idle)	3.0 sec	
Steering Cycle Time (low idle)	8.2 sec	

Service Refill Capacities

Fuel Tank	500 L	132.1 gal
Diesel Exhaust Fluid Tank	16 L	4.2 gal
Cooling Systems – Tier 4 Final/Stage V	81 L	21.4 gal
Cooling Systems – Tier 3/Stage IIIA equivalent	73 L	19.3 gal
Engine Crankcase	20 L	5.3 gal
Transmission	56 L	14.8 gal
Differentials and Final Drives – Front	43 L	11.4 gal
Differentials and Final Drives – Rear	43 L	11.4 gal
Hydraulic System – Implement/Steering	175 L	46.2 gal
Hydraulic Tank Only	75 L	19.8 gal

- All nonroad Tier 4 Final and Stage V diesel engines are required to use:
 - Ultra Low Sulfur Diesel (ULSD) fuels containing 15 ppm for EPA and 10 ppm for EU (mg/kg) sulfur or less. Biodiesel blends up to B20 are acceptable when blended with 15 ppm (mg/kg) sulfur or less ULSD and when the biodiesel feedstock meets ASTM D7467 specifications.
 - Cat DEO-ULS™ or oils that meet the Cat ECF-3, API CJ-4, API CK-4, and/or ACEA E9 specifications are required.
 - Diesel Exhaust Fluid (DEF) that meets all requirements defined in ISO 22241-1:2006.

Air Conditioning System

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 1.4 kg of refrigerant which has a CO₂ equivalent of 2.002 metric tonnes.

Axles

Front	Planetary – Fixed
Rear	Planetary – Oscillating
Oscillation Angle	±6°

Brakes

Service Brakes	Single Disc Wet (Enclosed) 2 WHL
Parking Brake	Drum and Shoe, Spring Applied, Hydraulic Released

Sound Performance

	Standard	Suppression
Operator Sound Level (ISO 6396:2008)	70 dBA	

Tier 4 Final/Stage V/Japan 2014/ Korea Tier 4 Final

Machine Sound Level (ISO 6395:2008)	111 dBA	109 dBA
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Brazil MAR-1 and China Nonroad Stage III, equivalent to Tier 3/Stage IIIA

Machine Sound Level (ISO 6395:2008)	112 dBA	110 dBA
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- The operator sound pressure level was measured according to the test procedures and conditions specified in ISO 6396:2008. The measurement was conducted at the maximum engine cooling fan speed.
- The operator sound pressure level uncertainty is ± 2 dB(A)
- Hearing protection may be needed when the machine is operated with a cab that is not properly maintained or when the doors or windows are open for extended periods or in a noisy environment.
- The machine sound power level was measured according to the test procedures and conditions specified in ISO 6395:2008. The measurement was conducted at the maximum engine cooling fan speed.

Blades

Straight Blade

Capacity	10.00 m ³	13.08 yd ³
Overall Width	3656 mm	12.0 ft
Height	1961 mm	6.4 ft
Height of Cutting Edge	990 mm	3.2 ft
Digging Depth	362 mm	1.2 ft
Ground Clearance	1140 mm	3.7 ft
Turning Radius – Outside Corner of Blade	6473 mm	21.2 ft
Turning Radius – Inside Corner of Blade	2910 mm	9.5 ft
Weight	2063 kg	4,548 lb
Total Operating Weight	26 052 kg	57,345 lb

Wheels

Combination Tips

Weight (Group)	6148 kg	13,554 lb
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Plus Tips

Weight (Group)	6342 kg	13,982 lb
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Paddle Tips

Weight (Group)	5954 kg	13,126 lb
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Chopper Tips

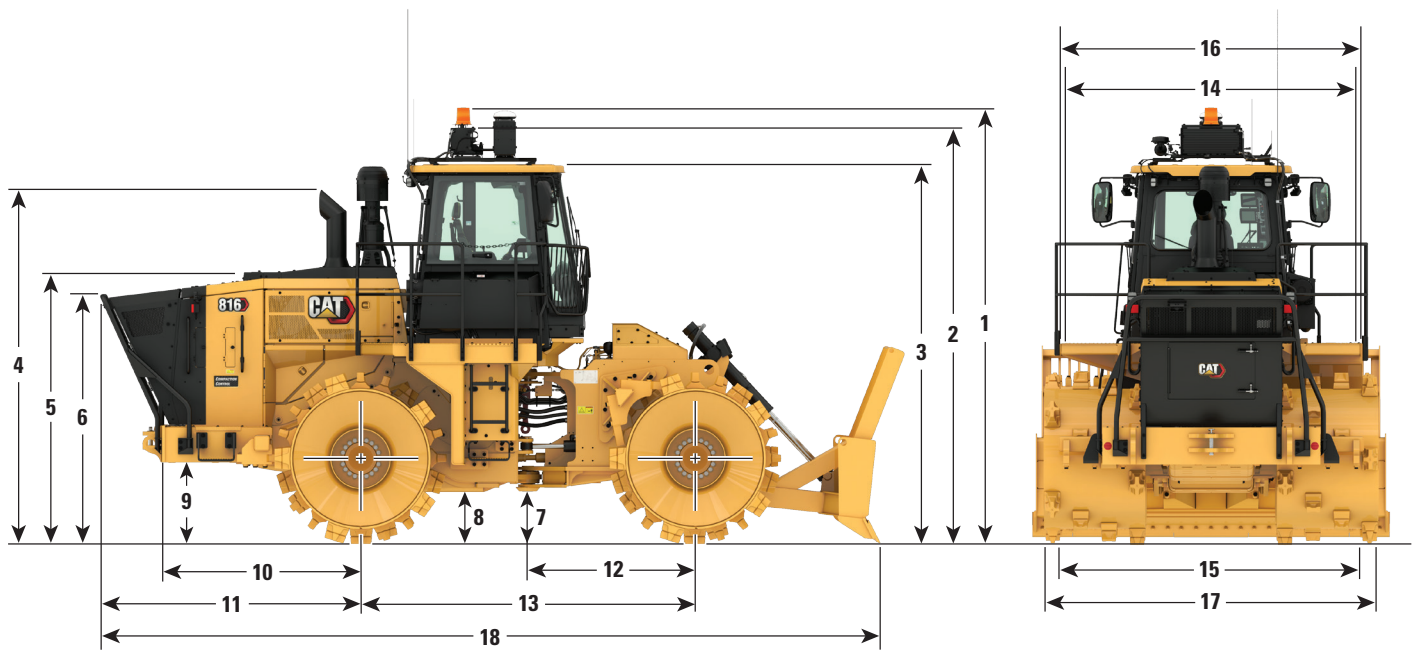
Weight (Group)	5733 kg	12,639 lb
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Outside Diameter	1717 mm	67.6 in
Drum Diameter	1400 mm	55.1 in
Drum Width	1016 mm	40.0 in
Tips per Row	5	
Tips per Wheel	20	
Replaceable	Weld On	
Width Over Drums	3338 mm	131.4 in
Tip Height	159 mm	6.25 in

816 Landfill Compactor Specifications

Dimensions

All dimensions are approximate.



1 Height to Top of Beacon	4368 mm	14.3 ft
2 Height to Top of A/C Condenser	4161 mm	13.7 ft
3 Height to Top of Cab Roof	3878 mm	12.7 ft
4 Height to Top of Exhaust Pipe	3547 mm	11.6 ft
5 Height to Top of Hood	2770 mm	9.1 ft
6 Height to Top of Rear Compactor Guard	2499 mm	8.2 ft
7 Ground Clearance to Hitch	519 mm	1.7 ft
8 Ground Clearance to Transmission Guard	516 mm	1.7 ft
9 Ground Clearance to Bottom of Bumper	818 mm	2.7 ft
10 Center Line of Rear Axle to Bumper	1990 mm	6.5 ft
11 Center Line of Rear Axle to Rear Compactor Guard	2614 mm	8.6 ft
12 Center Line of Front Axle to Hitch	1675 mm	5.5 ft
13 Wheelbase	3350 mm	11.0 ft
14 Width Over Front Striker Bars	3000 mm	9.8 ft
15 Width Over Rear Striker Bars	3036 mm	10.0 ft
16 Width Over Platform	3140 mm	10.3 ft
17 Width Over Drums	3338 mm	11.0 ft
18 Overall Machine Length with Straight Blade	7806 mm	25.6 ft

816 Landfill Compactor Standard and Optional Equipment

Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
POWER TRAIN			OPERATOR ENVIRONMENT (CONTINUED)		
Advanced Productivity Electronic Control System (APECS)	✓		Camera, rear vision	✓	
Air-to-air aftercooler	✓		Coat and hard hat hooks	✓	
Antifreeze, -50° C (-58° F)		✓	Fingertip shifting controls	✓	
Axle arrangements: no spin front, no spin rear, no spin front and rear	✓		Flip-up armrest	✓	
Brakes, full hydraulic, enclosed, wet multiple disc service brakes	✓		Glass (window) – rubber-mounted glass	✓	
Cat clean emission module (Tier 4 Final/Stage V only)	✓		Heater and defroster	✓	
Electro hydraulic parking brake	✓		Horn, electric	✓	
Electronic Clutch Pressure Control (ECPC)	✓		Horn group (trumpet)	✓	
Engine, Cat C7.1 configured for two emissions options: Tier 4 Final/Stage V or Tier 3/Stage IIIA equivalent	✓		Hydraulic controls – floor mounted	✓	
Engine driven cooling fan – suction	✓		Implement hydraulic lockout	✓	
Fuel priming pump (electric)	✓		Instrumentation, gauges: DEF fluid level (Tier 4 Final/Stage V only), engine coolant temperature, fuel level, hydraulic oil temperature, speedometer/tachometer, torque converter temperature	✓	
Fuel-to-air cooler	✓		Instrumentation, warning indicators: action alert system – three categories, brake oil pressure, electrical system – low voltage, engine failure malfunction alert and action lamp, parking brake status	✓	
Ground level engine shutoff	✓		Internal four-post rollover protective structure (ROPS/FOPS)	✓	
Heater, engine coolant, 120V		✓	Light, cab – dome	✓	
Heater, engine coolant, 240V		✓	Lights, cab – standard or LED	✓	
Muffler under hood (Tier 3/Stage IIIA equivalent only)	✓		Lunchbox and beverage holders	✓	
Radiator, unit core	✓		Mirror, cab – standard or heated	✓	
Starting aid (ether)	✓		Mirror, internal (panoramic)	✓	
Throttle lock	✓		Mirrors, heated, rearview (externally mounted)	✓	
Torque converter	✓		Precleaner, cab – standard or powered	✓	
Transmission, planetary with 2F/2R speed range control	✓		Radio, AM/FM/Aux/USB/Bluetooth		✓
ELECTRICAL			Radio, CB (ready)	✓	
Alarm, back-up	✓		Radio ready for entertainment: antenna, speakers, converter (12V, 10-15 amp)	✓	
Alternator, 150 amp	✓		Seat belt with minder, retractable, 76 mm (3 in) wide	✓	
Batteries, maintenance-free	✓		Seat, cab – heated and ventilated	✓	
Electrical system, 24V	✓		Seat, Cat Premium Plus (Leather)	✓	
Ground level lockable master disconnect switch	✓		STIC™ control system with lockout	✓	
Light, warning unswitched (LED strobe)	✓		Sun visor, front	✓	
Lighting system (front and rear)	✓		Tinted glass	✓	
Starter, electric	✓		Transmission gear (indicator)	✓	
Starting receptacle for emergency start	✓		Vital Information Management System (VIMS™): graphical information display, external data port, customizable operator profiles, event indicator light on rear grill	✓	
OPERATOR ENVIRONMENT			Wet-arm wipers/washers (front and rear): intermittent wipers (front and rear)	✓	
12V power port for mobile phone or laptop connection	✓				
Cat Compact Ready	✓				
Air conditioner with roof-mounted condenser	✓				
Cab, sound-suppressed pressurized	✓				

816 Landfill Compactor Standard and Optional Equipment

Standard and Optional Equipment (continued)

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

	Standard	Optional		Standard	Optional
GUARDS			OTHER STANDARD EQUIPMENT (CONTINUED)		
Guards, axle (front and rear)	✓		Ecology drains for engine, radiator, transmission, hydraulic tank	✓	
Guard, cab window	✓		Engine, crankcase, 500 hour interval with CJ-4 oil	✓	
Guards, crankcase and power train, hinged	✓		Emergency egress	✓	
Guard, driveshaft	✓		Fire suppression ready	✓	
Guard, radiator	✓		Fuel tank, 500 L (132.1 gal)	✓	
Striker bars	✓		Hitch, drawbar with pin	✓	
BLADES			Hoses, Cat XT™	✓	
Dozer arrangement: standard (no blade), straight blade	✓		Hydraulic, engine, and transmission oil coolers	✓	
FLUIDS			Oil change system, high speed	✓	
Antifreeze, -50° C (-58° F)		✓	Oil sampling valves	✓	
Antifreeze, premixed 50% concentration extended life (-34° C/-29° F)	✓		Steering, load sensing	✓	
TECHNOLOGY PRODUCTS			Total hydraulic filtration system	✓	
Product Link™ – GSM, satellite	✓		Vandalism protection caplocks	✓	
WHEELS AND CLEANER BARS			Venturi stack	✓	
Wheels and tips: wheel arrangements – 6.25" plus tip, 6.25" paddle tip, 6.25" plus and paddle; wheels, chopper	✓		SPECIAL ARRANGEMENTS		
Bar group – cleaner (cleaner fingers and striker bar)	✓		Engine precleaners – turbine or dual stage	✓	
OTHER STANDARD EQUIPMENT			Engine, sound suppression		✓
DEF tank fill gauge (Tier 4 Final/Stage V only)	✓		MISCELLANEOUS		
Doors, service access (locking)	✓		Film (ANSI) (Tier 4 Final/Stage V only)		✓
			EU certification (Tier 4 Final/Stage V only)		✓
			Plate – year of manufacture (Tier 3/Stage IIIA equivalent only)		✓

The following information applies to the machine at the time of final manufacture as configured for sale in the regions covered in this document. The content of this declaration is valid as of the date issued; however, content related to machine features and specifications are subject to change without notice. For additional information, please see the machine's Operation and Maintenance Manual.

For more information on sustainability in action and our progress, please visit <https://www.caterpillar.com/en/company/sustainability>.

Engine

- The Cat® C7.1 engine is available in configurations that meet U.S. EPA Tier 4 Final, EU Stage V, Japan 2014 and Korea Tier 5 emission standards or Brazil MAR-1 and China Nonroad Stage III emission standards, equivalent to U.S. EPA Tier 3 and EU Stage IIIA.
- Cat U.S. EPA Tier 4 Final, EU Stage V, Japan 2014 and Korea Tier 5 diesel engines are required to use ULSD (ultra-low sulfur diesel fuel with 15 ppm of sulfur or less) or ULSD blended with the following lower-carbon intensity fuels up to:
 - ✓ 20% biodiesel FAME (fatty acid methyl ester)*
 - ✓ 100% renewable diesel, HVO (hydrotreated vegetable oil) and GTL (gas-to-liquid) fuels
- Cat engines meeting Brazil MAR-1 and China Nonroad Stage III, equivalent to U.S. EPA Tier 3 and EU Stage IIIA, are compatible with diesel fuel blended with the following lower-carbon intensity fuels up to:
 - ✓ 100% biodiesel FAME (fatty acid methyl ester)**
 - ✓ 100% renewable diesel, HVO (hydrotreated vegetable oil) and GTL (gas-to-liquid) fuels

Refer to guidelines for successful application. Please consult your Cat dealer or “Caterpillar Machine Fluids Recommendations” (SEBU6250) for details.

*Engines with no aftertreatment devices can use higher blends, up to 100% biodiesel.

**For use of blends higher than 20% biodiesel, consult your Cat dealer.

Air Conditioning System

- The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 1.4 kg (3.1 lb) of refrigerant which has a CO2 equivalent of 2.002 metric tonnes (2.206 tons).

Paint

- Based on best available knowledge, the maximum allowable concentration, measured in parts per million (PPM), of the following heavy metals in paint are:
 - Barium < 0.01%
 - Cadmium < 0.01%
 - Chromium < 0.01%
 - Lead < 0.01%

Sound Performance

Tier 4 Final/Stage V/Japan 2014/Korea Tier 5:

	Standard	Suppression
Operator Sound Level (ISO 6396:2008)	70 dB(A)	
Machine Sound Level (ISO 6395:2008)	111 dB(A)	109 dB(A)

Brazil MAR-1 and China Nonroad Stage III, equivalent to U.S. EPA Tier 3 and EU Stage IIIA:

	Standard	Suppression
Operator Sound Level (ISO 6396:2008)	70 dB(A)	
Machine Sound Level (ISO 6395:2008)	112 dB(A)	110 dB(A)

- The operator sound pressure level was measured according to the test procedures and conditions specified in ISO 6396:2008. The measurement was conducted at the maximum engine cooling fan speed.
- The operator sound pressure level uncertainty is ± 2 dB(A).
- The machine sound power level was measured according to the test ISO 6395:2008. The measurement was conducted at the maximum engine cooling fan speed.
- Hearing protection may be needed when operating with an open operator station and cab (when not properly maintained or doors/windows open) for extended periods or in a noisy environment.

Oils and Fluids

- Caterpillar factory fills with ethylene glycol coolants. Cat Diesel Engine Antifreeze/Coolant (DEAC) and Cat Extended Life Coolant (ELC) can be recycled. Consult your Cat dealer for more information.
- Cat Bio HYDO™ Advanced is an EU Ecolabel approved biodegradable hydraulic oil.
- Additional fluids are likely to be present, please consult the Operations and Maintenance Manual or the Application and Installation guide for complete fluid recommendations and maintenance intervals.

Features and Technology

- The following features and technology may contribute to fuel savings and/or carbon reduction. Features may vary. Consult your Cat dealer for details.
 - Automatic engine and electrical system shutdown controls conserve fuel by reducing unnecessary idling
 - Throttle lock reduces fuel burn further by maintaining constant speed and also reduces operator fatigue
 - Advanced Productivity Electronic Control System (APECS) transmission controls delivers greater momentum on grades and saves fuel by carrying that momentum through the shift points
 - Extended maintenance intervals reduce fluid and filter consumption
 - Cat clean emissions module includes Diesel Particulate Filter (DPF), Diesel Oxidation Catalyst (DOC), and Selective Catalytic Reduction (SCR) technologies to reduce the engine's emissions



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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 Cat dealer for available options.

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