

825
Soil Compactor

Technical Specifications

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

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825 Soil Compactor Specifications

Engine

Engine Model	Cat® C15	
Emissions	U.S. EPA Tier 4 Final/ EU Stage V/Korea Stage V and Japan 2014 or Brazil MAR-1, emitting equivalent to U.S. EPA Tier 3/EU Stage IIIA	
Rated Speed	1,800 rpm	
Net Power (SAE J1349:2011)	302 kW	405 hp
Net Power (ISO 9249:2007)	302 kW	405 hp
Engine Power (ISO 14396:2002)	318 kW	426 hp
Gross Power (SAE J1995:2014)	324 kW	435 hp
Peak Net Torque (1,300 rpm)	2005 N·m	1,479 lbf-ft
Torque Rise	33%	
Bore	137.2 mm	5.4 in
Stroke	171.4 mm	6.7 in
Displacement	15.2 L	927.6 in^3
High Idle Speed	2,300 rpm	
Low Idle Speed	800 rpm	
Maximum Altitude without Derating (U.S. EPA Tier 4 Final/EU Stage V)	2834 m	9,298 ft
Maximum Altitude without Derating (U.S. EPA Tier 3/EU Stage IIIA)	2773 m	9,098 ft

- Net power advertised is the power available at the flywheel when the engine is equipped with fan at minimum speed, air intake system, exhaust system, and alternator.

Operating Specifications

Maximum Operating Weight (Tier 4 Final/ Stage V)	35 528 kg	78,326 lb
Maximum Operating Weight (Tier 3/Stage IIIA equivalent)	35 081 kg	77,340 lb

Transmission

Transmission Type	Planetary – Powershift – ECPC	
Travel Speeds		
Forward – First	5.5 km/h	3.4 mph
Forward – Second	10.3 km/h	6.4 mph
Forward – Third	17.8 km/h	11.1 mph
Reverse – First	6.6 km/h	4.1 mph
Reverse – Second	11.8 km/h	7.3 mph
Reverse – Third	19.7 km/h	12.2 mph

Hydraulic System

Pump Flow at 1,800 rpm	117 L/min	30.9 gal/min
Main Relief Pressure	26 000 kPa	3,771 psi
Maximum Supply Pressure	24 100 kPa	3,495 psi
Cylinder, Double-acting: Lift, Bore and Stroke	120 mm × 1070 mm	4.7 in × 42.1 in
Cylinder, Double-acting: Tilt, Bore and Stroke	95.25 mm × 215 mm	3.75 in × 8.5 in

Service Refill Capacities

Cooling System	116 L	30.6 gal
Engine Crankcase	34 L	9.0 gal
Transmission	66 L	17.4 gal
Fuel Tank	782 L	206.6 gal
Diesel Exhaust Fluid Tank (Tier 4 Final/ Stage V)	32 L	8.5 gal
Differentials and Final Drives – Front	100 L	26.4 gal
Differentials and Final Drives – Rear	110 L	29.1 gal
Hydraulic Tank Only	134 L	35.4 gal

- Cat diesel engines are required to use ULSD (ultra-low sulfur diesel fuel with 15 ppm of sulfur or less) and are compatible* with 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

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

** While Caterpillar engines are compatible with these alternative fuels, some regions may not allow their use.*

*** Tailpipe greenhouse gas emissions from lower-carbon intensity fuels are essentially the same as traditional fuels.*

**** Engines with no aftertreatment devices are compatible with higher blends, up to 100% biodiesel (for use of blends higher than 20% biodiesel, consult your Cat dealer).*

Axles

Front	Planetary – Fixed
Rear	Planetary – Oscillating
Oscillation Angle	±8°

Brakes

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

Sound Performance

Tier 4 Final/Stage V	
Operator Sound Pressure Level (ISO 6396:2008)	73 dB(A)
Machine Sound Power Level (ISO 6395:2008)	113 dB(A)
Operator Sound Pressure Level (ISO 6396:2008)	72 dB(A)*
Machine Sound Power Level (ISO 6395:2008)	110 dB(A)**
Tier 3/Stage IIIA	
Operator Sound Pressure Level (ISO 6396:2008)	73 dB(A)
Machine Sound Power Level (ISO 6395:2008)	113 dB(A)
Operator Sound Pressure Level (ISO 6396:2008)	72 dB(A)*
Machine Sound Power Level (ISO 6395:2008)	110 dB(A)**

* For machines in European Union countries and in countries that adopt the "EU Directives" and "UK Directives"

** European Union Directive "2000/14/EC" and UK Noise Regulation 2001 No. 1701

- The machine sound power level was measured according to ISO 6395:2008. The measurement was conducted at 70% of the maximum engine cooling fan speed.
- The operator sound pressure level was measured according to ISO 6396:2008. The measurement was conducted at 70% of the maximum engine cooling fan speed.
- 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.

Hydraulic System – Steering

Steering System – Circuit	Pilot Operated, Load Sensing	
Bore	114.3 mm	4.5 in
Stroke	576 mm	22.7 in
Steering System – Pump	Piston – Variable Displacement	
Maximum System Flow	170 L/min @ 1,800 rpm	44.9 gal/min @ 1,800 rpm
Steering Pressure Limited	24 000 kPa	3,481 psi
Vehicle Articulation Angle	86 degrees	

Blades

Moldboard Length	4390 mm	14.4 ft
Height Including Cutting Edge	1032 mm	3.4 ft
Maximum Depth of Cut	602 mm	1.97 ft
Maximum Lift Above Ground	958 mm	3.14 ft
Blade Tip Angle – Total	14.8°	
Blade Tip Angle – Forward	7.3°	
Blade Tip Angle – Back	7.5°	
Blade Tilt Angle – Right – Mechanical	5.1°	
Blade Tilt Angle – Left – Mechanical	4.1°	
Blade Tilt Angle – Right – Hydraulic	6.3°	
Blade Tilt Angle – Left – Hydraulic	5.4°	
Blade Tilt Angle – Right Full	10.8°	
Blade Tilt Angle – Left Full	10.1°	
Total Tilt Adjustment	890 mm	2.9 ft
Width Over End Bits	4628 mm	15.18 ft

Wheels

Weight	7333 kg	16,167 lb
Outside Diameter	1672 mm	5 ft 5.8 in
Drum Diameter	1299 mm	4 ft 3.1 in
Drum Width	1125 mm	3 ft 8.3 in
Tips per Wheel	65	
Width over Drums	3650 mm	11 ft 11.7 in

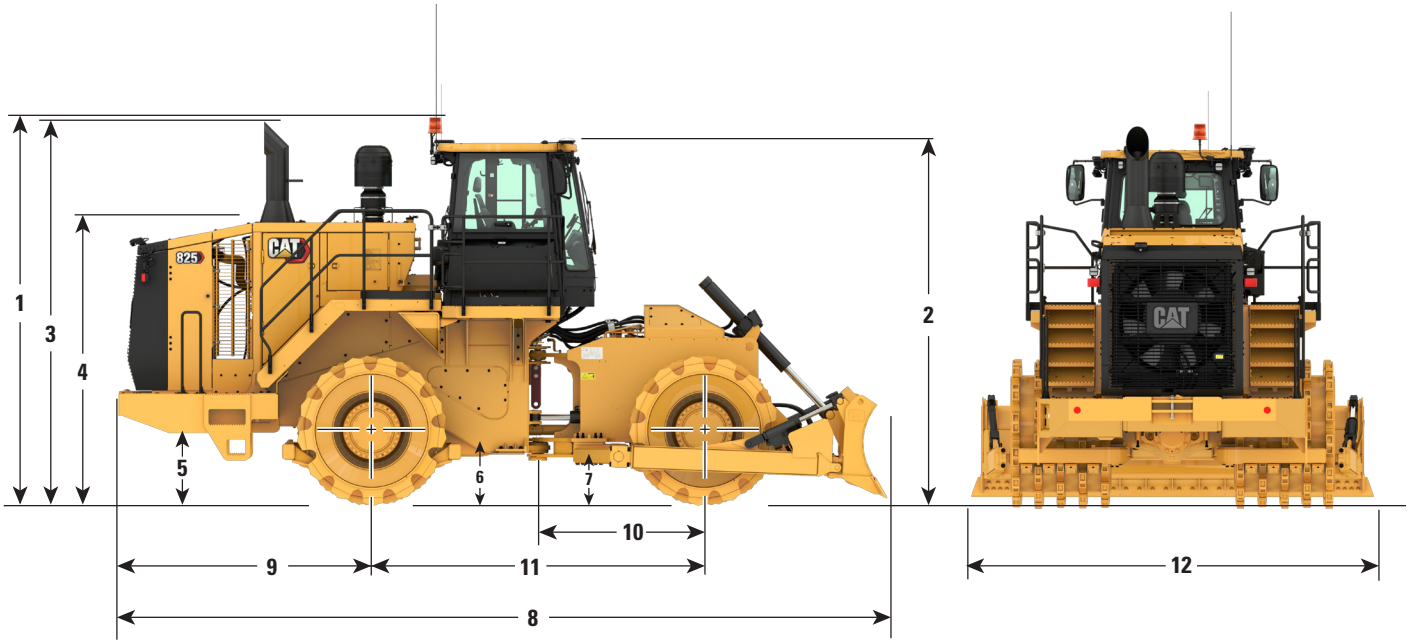
Wheels – High Impact

Weight	7534 kg	16,610 lb
Outside Diameter	1675 mm	5 ft 6 in
Drum Diameter	1299 mm	4 ft 3.1 in
Drum Width	1125 mm	3 ft 8.3 in
Tips per Wheel	65	
Width over Drums	3650 mm	11 ft 11.7 in

825 Soil Compactor Specifications

Dimensions

All dimensions are approximate.



1	Height to Top of Beacon	4381 mm	14 ft 14.5 in
2	Height to Top of Cab	4059 mm	13 ft 3.8 in
3	Height to Top of Exhaust Pipe	4290 mm	14 ft 0.9 in
4	Height to Top of Hood	3162 mm	10 ft 4.5 in
5	Ground Clearance to Bumper	810 mm	2 ft 7.9 in
6	Ground Clearance	492 mm	1 ft 7.4 in
7	Ground Clearance to Trunnion	450 mm	1 ft 5.7 in
8	Length with Blade on Ground (straight blade)	8561 mm	28 ft 1 in
9	Centerline of Rear Axle to Edge of Bumper	2830 mm	9 ft 3.4 in
10	Hitch to Centerline of Front Axle	1850 mm	6 ft 1 in
11	Wheelbase	3700 mm	12 ft 2 in
12	Width over Wheels	3650 mm	11 ft 11.7 in

Standard and Optional Equipment

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

	Standard	Optional
POWERTRAIN		
Air-to-air aftercooler	✓	
Axles – standard or no-spin rear		✓
Brakes, full hydraulic, enclosed, wet multiple disc service brakes	✓	
Cat® Clean Emission Module (U.S. EPA Tier 4 Final/EU Stage V only)	✓	
Electro-hydraulic parking brake	✓	
Electronic Clutch Pressure Control (ECPC)	✓	
Engine, Cat C15 configured for two emissions options: Tier 4 Final/Stage V, or emitting equivalent to U.S. EPA Tier 3/EU Stage IIIA	✓	
Fuel priming pump (electric)	✓	
Fuel-to-air cooler	✓	
Ground-level engine shutdown	✓	
Heater, engine coolant, 120V		✓
Heater, engine coolant, 240V		✓
Hydraulically driven demand fan	✓	
Integrated braking	✓	
Muffler under hood (Tier 3/Stage IIIA equivalent only)	✓	
Radiator, Aluminum Modular Radiator (AMR)	✓	
Separated cooling system	✓	
Single Clutch Speed Shifting (SCSS)	✓	
Starting aid (ether)	✓	
Throttle lock	✓	
Torque converter with lockup clutch (LUC)	✓	
Turbine precleaner, engine air intake	✓	
Transmission, planetary with 3F/3R speed range control	✓	
ELECTRICAL		
Alarm, backup	✓	
Alternator, 150 amp	✓	
Auxiliary start receptacle	✓	
Batteries, maintenance-free (4-1,000 CCA)	✓	
Electrical system, 24V	✓	
Ground-level lockable master disconnect switch	✓	
Light, warning switched (LED strobe)	✓	
Lighting, access stairway	✓	
Lighting system LED (front and rear)	✓	
Lighting, underhood	✓	
Lights, directional (rear)	✓	
Starter, electric (heavy duty)	✓	

	Standard	Optional
OPERATOR ENVIRONMENT		
Cab, sound-suppressed pressurized, radio ready for entertainment includes antenna, speakers, converter (12-volt 10/15-amp) and power port	✓	
Air conditioner	✓	
Cab door, sliding window (LH)	✓	
Camera, rear vision	✓	
Cat Detect: object detection (ready)	✓	
Coat and hard hat hooks	✓	
Electro-hydraulic tilt and lift controls	✓	
Fingertip shifting controls	✓	
Flip-up armrest	✓	
Glass (window) – rubber-mounted glass	✓	
Heater and defroster	✓	
Horn, electric	✓	
Hydraulic controls – seat mounted	✓	
Implement hydraulic lockout	✓	
Intermittent wipers (front and rear)	✓	
Instrumentation, gauges: diesel exhaust fluid (DEF) level (Tier 4 Final/Stage V only), engine coolant temperature, fuel level, hydraulic oil temperature, speedometer/tachometer, torque converter temperature	✓	
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	✓	
Internal four-post rollover protective structure/falling objects protective structure (ROPS/FOPS)	✓	
Lights, cab – dome	✓	
Lunchbox and beverage holders	✓	
Mirror, internal (panoramic)	✓	
Mirrors, heated, rearview (externally mounted)	✓	
Precleaner, cab powered	✓	
Radio, AM/FM/Aux/USB/Bluetooth®		✓
Radio, CB (ready)	✓	
Seat belt with minder, retractable, 76 mm (3") wide	✓	
Slope Indicate	✓	
Premium plus seat containing forced air heating and cooling, 2-way thigh adjustment, power lumbar and back bolster adjustment, ride stiffness adjustment, dynamic end dampening, and leather finish	✓	
Steering and Transmission Integrated Control (STIC™) system with lockout	✓	
Transmission gear (indicator)	✓	
Vital Information Management System (VIMS™): graphical information display, external data port, customizable operator profiles, event indicator light on rear grill	✓	
Wet-arm wipers/washers (front and rear)	✓	

825 Soil Compactor Standard and Optional Equipment

Standard and Optional Equipment (continued)

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

	Standard	Optional
GUARDS		
Guards, crankcase and powertrain	✓	
Guard, driveshaft	✓	
BLADES		
Bulldozer straight blade, hydraulics, and linkage	✓	
FLUIDS		
Antifreeze, -50° C (-58° F)		✓
Antifreeze, premixed 50% concentration extended life (-34° C/-29° F)	✓	
TECHNOLOGY PRODUCTS		
Product Link™ – Cellular, Satellite	✓	
Compaction control, basic	✓	
Cat Compaction, SBAS or RTK Mapping	✓	
WHEELS AND CLEANER BARS		
Wheels, tamping foot	✓	
Wheels, high impact		✓
Cleaner bars with teeth	✓	

	Standard	Optional
OTHER STANDARD EQUIPMENT		
Doors, service access (locking)	✓	
DEF Injector Phase Change Tank	✓	
Ecology drains for engine, radiator, transmission, hydraulic tank	✓	
Engine idle management features: – Auto idle kickdown – Delayed engine shutdown – Engine idle shutdown	✓	
Engine, crankcase, 500-hour interval with CJ-4 oil	✓	
Emergency platform egress	✓	
Fire suppression ready	✓	
Fold down exhaust stack for shipping	✓	
Fuel tank, fast fill, 782 L (207 gal)	✓	
Hitch, drawbar with pin	✓	
Hoses, Cat XT™	✓	
Hydraulic, engine, and transmission oil coolers	✓	
Oil change system, high speed	✓	
Oil sampling valves	✓	
Stairways, fixed–L/R (rear access)	✓	
Steering, load sensing	✓	
Total hydraulic filtration system	✓	
Vandalism protection caplocks	✓	
Venturi stack	✓	
SPECIAL ARRANGEMENTS		
Engine precleaners – single stage	✓	
Engine precleaners – dual stage		✓
Engine, sound suppression		✓
MISCELLANEOUS		
CE/UKCA Certification (standard where regulations require it) (U.S. EPA Tier 4 Final/EU Stage V only)		✓
Plate – year of manufacture (standard where regulations require it)		✓

825 Soil Compactor Environmental Declaration

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® C15 engine is available in two engine emission configurations. One meets U.S. EPA Tier 4 Final, EU Stage V, Korea Stage V, and Japan 2014 emissions standards. The other meets Brazil MAR-1, emitting equivalent to U.S. EPA Tier 3 and EU Stage IIIA.
- Cat U.S. EPA Tier 4 Final/EU Stage V diesel engines are required to use ULSD (ultra-low sulfur diesel fuel with 15 ppm of sulfur or less) and are compatible* with 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, emitting equivalent to U.S. EPA Tier 3/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.

** While Caterpillar engines are compatible with these alternative fuels, some regions may not allow their use.*

*** Tailpipe greenhouse gas emissions from lower-carbon intensity fuels are essentially the same as traditional fuels.*

**** Engines with no aftertreatment devices are compatible with 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 or R1234yf. See the label or instruction manual for identification of the gas.
- If equipped with R134a (Global Warming Potential = 1430), the system contains 2.0 kg (4.4 lb) of refrigerant which has a CO_2 equivalent of 2.86 metric tonnes (3.15 tons).

Paint

- Based on best available knowledge, the maximum allowable concentrations, measured in parts per million (PPM), of the following "heavy metals" measured by U.S. Environmental Protection Agency's (EPA) Toxicity Characterization Leaching Procedure, DFR 40, Part 261, Appendix 2, Method 1311 (TCLP), are as follows:
  - – Barium < 100 PPM
  - – Cadmium < 1 PPM
  - – Chromium < 5 PPM
  - – Lead < 5 PPM

Sound Performance

Tier 4 Final/Stage V	
Operator Sound Pressure Level (ISO 6396:2008)	73 dB(A)
Machine Sound Power Level (ISO 6395:2008)	113 dB(A)
Operator Sound Pressure Level (ISO 6396:2008)	72 dB(A)*
Machine Sound Power Level (ISO 6395:2008)	110 dB(A)**
Tier 3/Stage IIIA	
Operator Sound Pressure Level (ISO 6396:2008)	73 dB(A)
Machine Sound Power Level (ISO 6395:2008)	113 dB(A)
Operator Sound Pressure Level (ISO 6396:2008)	72 dB(A)*
Machine Sound Power Level (ISO 6395:2008)	110 dB(A)**

* For machines in European Union countries and in countries that adopt the "EU Directives" and "UK Directives"

** European Union Directive "2000/14/EC" and UK Noise Regulation 2001 No. 1701

- The machine sound power level was measured according to ISO 6395:2008. The measurement was conducted at 70% of the maximum engine cooling fan speed.
- The operator sound pressure level was measured according to ISO 6396:2008. The measurement was conducted at 70% of the maximum engine cooling fan speed.
- 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.

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.
- 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.
  - – Engine idle management system and auto engine idle shutdown reduce idle rpm and maximize fuel efficiency
  - – Autoshift mode to automatically upshift or downshift based on machine speed, optimizing performance, and conserving fuel
  - – Load sensing hydraulic steering system enables precise machine control for easier loading
  - – Extended maintenance intervals reduce fluid and filter consumption
  - – Cat torque converter with lock-up clutch improves travel speeds, optimizes fuel efficiency, and eliminates torque converter losses, while lowering system heat



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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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