

825

SOIL COMPACTOR



Engine Model
Net Power (SAE J1349:2011)
Rated Speed

Cat[®] C15
302 kW (405 HP)
1800 r/min (1800 r/min)



825

SOIL COMPACTOR

Cat soil compactors are designed with durability built-in, ensuring maximum availability through multiple lifecycles. With optimized performance and simplified serviceability, our machines allow you to operate more efficiently and safely. Representing a long-standing commitment to quality and performance, this rugged, powerful machine is designed and built for heavy-duty compaction and dozing operations. Focused on helping our customers succeed, we have continued to build upon each new series. The 825 continues our legacy of reliability, performance, safety, operator comfort, serviceability, and efficiency.



IMPROVED TECHNOLOGY

Boost your productivity with technologies like Cat Compact 3D Mapping and Cat Compaction Control with Machine Drive Power.

DESIGNED FOR SAFETY AND SERVICE

Designed to reduce your service and maintenance costs with longer filter life.

ENHANCED OPERATOR COMFORT

Updated cab with steering transmission integrated control, heated and cooled leather seat, and adjustable settings to help operators work more productively throughout the day.

OPERATOR COMFORT AND CONTROL



- Pressurized cab sits on isolation mounts, improving comfort and reducing sound.
- Cab features a convenient floor storage tray/lunch box.
- 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.
- Control panel gives operators the information and controls for safer and time-saving settings.
- Steering and Transmission Integrated Control (STIC™) simplicity provides maximum responsiveness and control. STIC combines directional selection, gear selection, and steering into a single lever.



TOP-TIER SERVICE AND SUPPORT



- Safe and convenient service via ground-level or platform access to daily service points.
- Swing-out doors on both sides of the engine compartment provide easy access to daily service checks.
- Ecology drains for ease of service and prevention of spills.
- Reduce downtime with Vital Information Management system (VIMS™) notifications so operators and technicians can resolve problems before failure.
- Sight gauges mean quick visual inspection and minimize fluid contamination.
- Swing-out doors on both sides provide convenient access to daily service checkpoints. Engine compartment lighting aids visibility.
- Ground-level service switch area includes an electrical disconnect switch, engine shutdown switch, and stairway light switch.
- Cat dealers keep you running with preventive maintenance programs, maintenance contracts, best-in-class parts availability, and operator training support.

MAINTENANCE SAVINGS

GROUPED COMPONENTS
REDUCE MAINTENANCE TIME

SIGHT GAUGES REDUCE
CONTAMINATION RISK
AND DAILY SERVICE TIME



VIMS™ ALERTS
OPERATOR
BEFORE
COMPONENT
FAILURE

POWERFUL EFFICIENCY

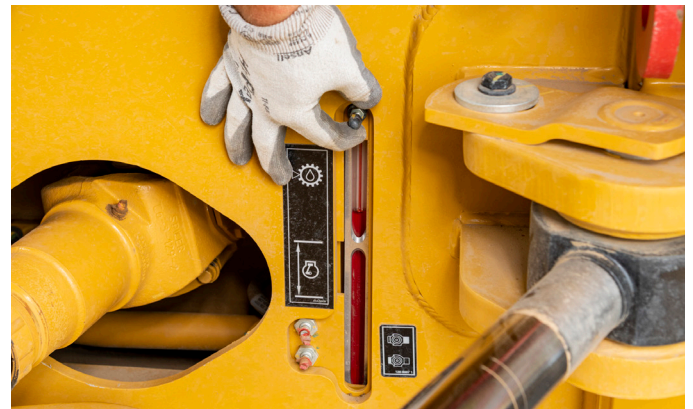
- Auto shift mode, when active, allows the machine to upshift or downshift based on machine speed and torque, optimizing performance and saving fuel.
- The left pedal acts as a brake, a transmission neutralizer, and an engine decelerator to override the engine speed selected by the throttle lock. Operators can slow down when the throttle lock is engaged and return to the throttle lock without pressing a resume or set button. Helps with maneuvering around trucks, tractors, or other obstacles.
- STIC system enhances operator comfort by integrating steering and transmission control functions in a single lever. Includes finger-controlled gear selection.
- Load-sensing hydraulic steering system ensures smooth steering at all speeds and engine levels.
- Variable displacement piston pumps enhance efficiency.
- Steering articulates 43 degrees in each direction, allowing operators precise positioning for easy operation in tight areas.
- Electro hydraulic controls help ensure responsive, predictable implement control.
- Electronically controlled hydraulic cylinder stops deliver smooth machine operation for less stress on the operator.



PRODUCTIVITY WITH TECHNOLOGY



- Cat Compaction Control system uses Machine Drive Power (MDP) technology to measure rolling resistance and correlates it with soil stiffness. MDP works in both cohesive and granular soils. Optional 3D mapping system maps compaction measurements to the precise location where the operator is working, providing a real-time view of progress and a record of compaction uniformity.
- Detect technologies help keep people and equipment safe by keeping the operator aware of the work area and by monitoring and reporting unsafe conditions, like avoidance zones.
- Compact technologies combine advanced compaction measurement, in-cab guidance, and reporting capabilities to help you consistently meet compaction targets fast, uniformly, and with fewer passes.
- Cat Product Link™ is deeply integrated into your machine, giving you access to information like machine location, hours, fuel usage, idle time, and event codes via the online VisionLink® user interface. Helps effectively manage the fleet and lower operating costs.



OPTIMIZE COMPACTION

- Chevron tamping tip design provides greater ground pressure, more compaction, excellent traction, and a smooth ride.
- Compaction is achieved from the bottom of the lift to the top. The tapered tips walk out of the lift without “fluffing” the soil. The top of the lift is compacted, and the surface is relatively smooth and sealed so hauling units are able to maintain a high speed when traveling over the fill.
- The 825 travel speed delivers four forces of compaction: pressure, manipulation, impact, and vibration.
- This compactor also spreads fill, potentially reducing the number of spreader tractors needed for the project.
- Symmetrical tamping tip pattern delivers equal compaction in forward or reverse. Tips are full perimeter and replaceable.
- Two cleaner bars on each wheel keep drums free of carryover dirt, in forward and reverse, maximizing efficiency. Cleaner bars are available with standard or abrasive tips, depending upon the application. Bars are adjustable and bar tips are heat-treated and direct-hardened cutting-edge steel to increase life.



MORE THAN MACHINES

BUILT AROUND YOUR SUCCESS

When you buy Cat equipment, you get so much more than the machine. You also get the support of a best-in-class dealer network, backed by a range of flexible solutions, technology, tools, and more.



CUSTOMER VALUE AGREEMENTS

A Customer Value Agreement (CVA) from your Cat dealer helps you do more and worry less. A CVA simplifies machine ownership and maintenance, adds the security of expert dealer support, and gives you the peace of mind from effective equipment health management.

GENUINE CAT PARTS

Genuine Cat parts deliver the highest level of reliability and productivity. Order direct from your Cat dealer or shop online at parts.cat.com.

REPAIR OPTIONS

A broad range of repair options gives you choices that work with your needs, budget, and timeline. Every repair is performed by expert Cat technicians. You'll receive smart repair advice, a timely, accurate quote, and service that gets your machine back into action quickly.

FINANCIAL SERVICES

Count on Cat Financial to provide the best finance and extended protection solutions for your business. For more than 30 years, we have helped our customers succeed through financial service excellence.



DOZERS



SKID STEERS



MATERIAL HANDLERS



EXCAVATORS



WHEEL LOADERS



TRACK LOADERS

TECHNICAL SPECIFICATIONS

Engine

Gross Power (SAE J1995:2014)	324 kW	435 hp
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
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	1800 r/min	1,800 r/min
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	2300 r/min	2,300 r/min
Low Idle Speed	800 r/min	800 r/min
Maximum Altitude - Without Derating (Tier 4 Final/Stage V)	2834 m	9,298 ft
Maximum Altitude - Without Derating (Tier 3/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 mile/h
Travel Speeds - Forward - Second	10.3 km/h	6.4 mile/h
Travel Speeds - Forward - Third	17.8 km/h	11.1 mile/h
Travel Speeds - Reverse - First	6.6 km/h	4.1 mile/h
Travel Speeds - Reverse - Second	11.8 km/h	7.3 mile/h
Travel Speeds - Reverse - Third	19.7 km/h	12.2 mile/h

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
Cylinders, Double Acting - Lift, Bore and Stroke	120 mm x 1070 mm (4.7 in x 42.1 in)	
Cylinders, Double Acting - Tilt, Bore and Stroke	95.25 mm x 215 mm (3.75 in x 8.5 in)	

Service Refill Capacities

Cooling System	116 l	30.6 gal (US)
Engine Crankcase	34 l	9 gal (US)
Transmission	66 l	17.4 gal (US)
Fuel Tank	782 l	206.6 gal (US)
Diesel Exhaust Fluid Tank (Tier 4 Final/Stage V)	32 l	8.5 gal (US)
Differential - Final Drives - Front	100 l	26.4 gal (US)
Differential - Final Drives - Rear	110 l	29.1 gal (US)
Hydraulic Tank Only	134 l	35.4 gal (US)

Cat 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 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). ** Tailpipe greenhouse gas emissions from lower-carbon intensity fuels are essentially the same as traditional fuels. – Cat DEO-ULS™ or oils that meet the Cat ECF-3, API CJ-4, and ACEA E9 specifications are required. – Diesel Exhaust Fluid (DEF) that meets all requirements defined in ISO 22241-1:2006.

Axles

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

Air Conditioning System

Air Conditioning	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 CO2 equivalent of 2.86 metric tonnes (3.15 tons).
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Braking System

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)	73 dB(A)
Machine Sound Power Level (ISO 6395:2008)	113 dB(A)	113 dB(A)
Operator Sound Pressure Level (ISO 6396:2008)*	72 dB(A)	72 dB(A)
Machine Sound Power Level (ISO 6395:2008)**	110 dB(A)	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" as amended by "2005/88/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 percent 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 percent 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.

Sound Performance - Tier 3 / Stage IIIA

Operator Sound Pressure Level (ISO 6396:2008)	73 dB(A)	73 dB(A)
Machine Sound Power Level (ISO 6395:2008)	113 dB(A)	113 dB(A)
Operator Sound Pressure Level (ISO 6396:2008)*	72 dB(A)	72 dB(A)
Machine Sound Power Level (ISO 6395:2008)**	110 dB(A)	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" as amended by "2005/88/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 percent 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 percent 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 Pa	3,481 lb/in ²
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	5.5 ft
Drum Diameter	1299 mm	4.3 ft
Drum Width	1125 mm	3.7 ft
Tips per Wheel	65	
Width - Over Drums	3650 mm	11.97 ft

Wheels - High Impact

Weight	7534 kg	16,610 lb
Outside Diameter	1675 mm	5.5 ft
Drum Diameter	1299 mm	4.3 ft
Drum Width	1125 mm	3.8 ft
Tips per Wheel	65	
Width over Drums	3650 mm	11.97 ft

Dimensions (Approximate)

Height - Top of Beacon	4381 mm	14.5 ft
Height - Top of Cab Roof	4059 mm	13.4 ft
Height - Top of Exhaust Pipe	4290 mm	14.1 ft
Height to Top of Hood	3162 mm	10.5 ft
Ground Clearance - Bumper	810 mm	2.8 ft
Ground Clearance	492 mm	1.7 ft
Ground Clearance to Trunnion	450 mm	1.47 ft
Length - With Blade on Ground	8561 mm	28 ft
Centerline of Rear Axle to Bumper	2830 mm	9.3 ft
Hitch to Centerline of Front Axle	1850 mm	6.1 ft
Wheel Base	3700 mm	12.2 ft
Width - Over Wheels	3650 mm	11.12 ft

STANDARD & OPTIONAL EQUIPMENT

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

	Standard	Optional		Standard	Optional
FLUIDS			OPERATOR ENVIRONMENT <i>(continued)</i>		
Antifreeze, premixed 50% concentration extended life (-34° C/-29° F)	✓		Lunchbox and beverage holders	✓	
Antifreeze, -50° C (-58° F)		✓	Mirror, internal (panoramic)	✓	
OTHER STANDARD EQUIPMENT			Mirrors standard or heated, rearview (externally mounted)	✓	
Doors, service access (locking)	✓		Radio ready for entertainment: – Antenna – Speakers – Converter (12V, 10-15 amp)	✓	
Ecology drains for engine, radiator, transmission, hydraulic tank	✓		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	✓	
Engine, crankcase, 500 hour interval with CJ-4 oil	✓		Seat belt with minder, retractable, 76 mm (3 in) wide	✓	
Emergency platform egress	✓		Steering and Transmission Integrated Control (STIC™) system with lockout	✓	
Fire suppression ready	✓		Transmission gear (indicator)	✓	
Fuel tank, fast fill, 782 L (207 gal)	✓		Vital Information Management System (VIMS™): – Graphical information display – External data port – Customizable operator profiles – Event indicator light on rear grill	✓	
Hitch, drawbar with pin	✓		Wet-arm wipers/washers (front and rear): – Intermittent wipers (front and rear)	✓	
Hoses, Cat XT™	✓		Glass (window) - rubber-mounted glass	✓	
Hydraulic, engine, and transmission oil coolers	✓		Precleaner, cab powered	✓	
Oil change system, high speed	✓		Camera, rear vision		✓
Oil sampling valves	✓		Radio, AM/FM/AUX/USB/Bluetooth®		✓
Steering, load sensing	✓		Radio, CB (ready)		✓
Total hydraulic filtration system	✓		ELECTRICAL		
Vandalism protection caplocks	✓		Alarm, back-up	✓	
Venturi stack	✓		Alternator, 150 amp	✓	
OPERATOR ENVIRONMENT			Batteries, maintenance-free (4-1,000 CCA)	✓	
12V power port for mobile phone or laptop connection	✓		Electrical system, 24V	✓	
Air conditioner	✓		Ground-level lockable master disconnect switch	✓	
Cab, sound-suppressed pressurized	✓		Lights, directional (rear)	✓	
Cab door, sliding window (LH)	✓		Light, warning switched (LED strobe)	✓	
Cat Compaction Control (ready)	✓		Lighting system LED, (front and rear)	✓	
Cat Detect: Object Detection (ready)	✓		Starter, electric (heavy duty)	✓	
Cat Detect: Object Detection (ready)	✓		Auxiliary start receptacle	✓	
Coat and hard hat hooks	✓		MISCELLANEOUS		
Fingertip shifting controls	✓		CE/UKCA Certification (standard where regulations require it)		✓
Flip-up armrest	✓		Plate – year of manufacture		✓
Heater and defroster	✓		TECHNOLOGY PRODUCTS		
Horn, electric	✓		Product Link™: – cellular, satellite	✓	
Hydraulic controls - seat mounted	✓		Compaction control, basic		✓
Implement hydraulic lockout	✓				
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	✓				
Light, (dome) cab	✓				

	Standard	Optional
WHEELS AND CLEANER BARS		
Cleaner bars with teeth	✓	
SPECIAL ARRANGEMENTS		
Engine precleaners: – dual stage		✓
POWERTRAIN		
Advanced Productivity Electronic Control System (APECS)	✓	
Air-to-air aftercooler	✓	
Brakes, full hydraulic, enclosed, wet multiple disc service brakes	✓	
Cat Clean Emissions 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 Tier 3/Stage IIIA	✓	
Fuel priming pump (electric)	✓	
Fuel-to-air cooler	✓	
Ground-level engine shutdown	✓	
Muffler (under hood) (Tier 3/Stage IIIA equivalent only)	✓	
Radiator, aluminum modular radiator (AMR)	✓	
Starting aid (ether)	✓	
Throttle lock	✓	
Torque converter with lockup clutch (LUC)	✓	
Transmission, planetary, with 3F/3R speed range control	✓	
Axles: – Standard or no-spin rear	✓	
Heater, engine coolant, 120V		✓
Heater, engine coolant, 240V		✓
GUARDS		
Guards, crankcase and powertrain	✓	
Guard, driveshaft	✓	

For more complete information on Cat products, dealer services and industry solutions, visit us on the web at www.cat.com.

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Build Number: 11A
(Global)

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