



The Cat® C2.2 Industrial Diesel Engine is offered in ratings ranging from 31-45.5 kW (41.6-61 bhp) @ 2200-3000 rpm. These ratings meet U.S. EPA Tier 4 Final, EU Stage IIIA or EU Stage IIIB emission standards. Industries and applications powered by C2.2 engines include: Agriculture, Aerial Lifts, Bore/Drill Rigs, Chippers/Grinders, Compactors/Rollers, Compressors, Construction, General Industrial, Irrigation Equipment, Material Handling, Mining, Mobile Earthmoving Equipment, Mobile Light Towers, Mobile Sweepers, Paving Equipment, Pumps, Trenchers, Turf and Landscaping, Underground Mining Equipment and Welders.

Specifications

Power Rating		
Minimum Power	31 kW	41.6 bhp
Maximum Power	45.5 kW	61 bhp
Rated Speed	2200 - 3000 rpm	

Emission Standards	
Emissions	U.S. EPA Tier 4 Final, EU Stage IIIA or EU Stage IIIB

General	
Engine Configuration	In-Line 4, 4-Stroke-Cycle Diesel
Bore	84 mm (3.3 in)
Stroke	100 mm (3.9 in)
Displacement	2.2 L (135 in ³)
Aspiration	Naturally Aspirated (NA), Turbocharged (T) or Turbocharged-Aftercooled (TA)
Compression Ratio	23.3:1
Combustion System	Indirect Injection
Rotation (from flywheel end)	Counterclockwise
Cooling System Capacity	3.6 L (3.8 qt)
Lube System (refill)	10.6 L (11.2 qt)

Engine Dimensions (Approximate. Final dimensions dependent on selected options)	
Length	660 mm (26 in)
Width	459-531 mm (18-20.9 in)
Height	725 mm (28.5 in)
Weight - Net Dry (Basic Operating Engine Without Optional Attachments)	184-194 kg (406-427.7 lb)

Aftertreatment Dimensions (Approximate. Final dimensions dependent on selected options)	
Length	449 mm (17.6 in) (Tier 4 Final, Stage IIIB)
Weight	16 kg (35.3 lb) (Tier 4 Final, Stage IIIB)
Diameter	198 mm (7.8 in)

Benefits and Features

Emissions

Meets U.S. EPA Tier 4 Final, EU Stage IIIB emission standards.

Reliable, Quiet and Durable Power

World-class manufacturing capability and processes coupled with proven core engine designs assure reliability, quiet operation, and many hours of productive life.

High Performance

Substantial torque rise delivers impressive performance throughout a wide speed range while maintaining low operating costs.

Fuel Efficiency

Fuel consumption optimized to match operating cycles of a wide range of equipment and applications while maintaining low operating costs.

Broad Application Range

Industry leading range of factory configurable ratings and options for agricultural, material handling, construction, mining, aircraft ground support, and other industrial applications.

Package Size

Ultra-compact package size ensures ease of installation as well as exceptional power density.

Low Cost Maintenance

Single-side servicing improves ease of maintenance and simplifies the servicing routine. Standard 500 hour service intervals.

Quality

Every Cat engine is manufactured to stringent quality standards in order to assure customer satisfaction.

World-class Product Support Offered Through Global Cat Dealer Network

- Scheduled maintenance, including S•O•SSM sample
- Customer Support Agreements (CSA)
- Caterpillar Extended Service Coverage (ESC)
- Superior dealer service network
- Extended dealer service network through the Cat Industrial Service Distributor (ISD) program

Tier 4 Final, Stage IIIB Aftertreatment Features

Regeneration. Highly effective passive regeneration under most operating environments and cycles. Automatic, transparent active regeneration backup system during light load or adverse operating cycles. Wall flow DPF and through-flow DOC to effectively remove and manage emissions. **Mounting.** Multiple off- and on- engine installation options provide customers with simple and flexible solutions for many applications. **Service.** Minimum 3000 hour DPF ash service intervals.

Standard Equipment

Air Inlet System

- Inlet manifold with choice of inlets.

Control System

- Alternator 12 volt 65 amp
- Tier 4 Final: Alternator 12V 85 amp
- Starter motor 12 volt
- Glow plug starting aid

Cooling System

- Belt-driven coolant pump
- Coolant temperature switch
- Choice of cooling fans

Flywheels and Flywheel Housing

- SAE No. 7 1/2, SAE No. 8 or SAE No. 10 flywheel
- Choice of SAE No. 4 or standard backplate flywheel housing

Fuel System

- Fuel injection pump
- Spin-on fuel filter
- Electronic Shut-off Solenoid (ESOS)

Lube System

- Alternative oil fillers
- Spin-on lube oil filter
- Lube oil pressure switch
- Lube oil sump

Power Take Off (PTO)

- Provision for Power Take Off (PTO)
- SAE A PTO drive (Tier 4 Final, Stage IV)

General

- Cast iron, engine block
- Cast iron exhaust manifold--side outlet
- Cold start capability to -20° C (-4° F)
- Gradeability 35° continuous
- Paint: Caterpillar yellow, with optional colors available at request

U.S. EPA Tier 4 Final, EU Stage IIIB Aftertreatment/Clean Emissions Control Equipment

- Diesel Particulate Filter (DPF) with range of outlet options
- Diesel Oxidation Catalyst (DOC)



The International System of Units (SI) is used in this publication. CAT, CATERPILLAR, their respective logos, ADEM, EUI, S-O-S, "Caterpillar Yellow" and the "Power Edge" trade dress, as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.