



The Cat® C1.1 Industrial Diesel Engine is offered in ratings ranging from 14.4-18.4 bkW (19.3-24.7 bhp) @ 1800-2800 rpm. These ratings meet U.S. EPA Tier 4 Final emission standards. Ratings: 13.7-21.0 bkW (18.4-28.2 bhp) @ 2200-3000 rpm are also available for Europe and, depending on applicable emission standards, may be introduced in other regulated areas. Nonroad engines less than 19 kW (25 hp) are not currently subject to EU emission standards. Industries and applications powered by C1.1 engines include: Aircraft Ground Support, Auxiliary Power Units, Bore/Drill Rigs, Chippers/Grinders, Compactors/Rollers, Construction, Forestry, General Industrial, Material Handling, Mining, Mobile Earthmoving Equipment, Mobile Light Towers, Pumps, Trenchers, Underground Mining Equipment.

**Specifications**

Power Rating		
Minimum Power	14.4 bkW	19.3 bhp
Maximum Power	21 bkW	28.2 bhp
Rated Speed	2200-3400 rpm	

Emission Standards	
Emissions	14.7-18.4 bkW (19.7-24.7 bhp) meet U.S. EPA Tier 4 Final. Other ratings available for Europe and other regions.

General	
Engine Configuration	In-Line 3, 4-Stroke-Cycle Diesel
Bore	77 mm (3.03 in)
Stroke	81 mm (3.19 in)
Displacement	1.13 L (69 in³)
Aspiration	Naturally Aspirated (NA)
Compression Ratio	23:1
Combustion System	Indirect Injection
Rotation (from flywheel end)	Counterclockwise
Cooling System Capacity	1.9 L (2 qt)
Lube System (refill)	3.4-4.4 L (3.6-4.6 qt)

Engine Dimensions (Approximate. Final dimensions dependent on selected options)	
Length	491 mm (19.33 in)
Width	400 mm (15.74 in)
Height	576 mm (22.7 in)

Weight - Net Dry (Basic Operating Engine Without Optional Attachments)	87 kg (191 lb)
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## Benefits and Features

### Emissions

Available for Europe and, depending on applicable emission standards, may be introduced in other regulated areas. Nonroad engines less than 19 kW (25 hp) are not currently subject to EU emission standards. Some ratings meet U.S. EPA Tier 4 Final 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.

### Reliable, Quiet, and Durable Power

The introduction of a simple electronic governor system for Tier 4 Final gives customers the flexibility of electronic machine integration if needed.

### High Performance

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.

### Package Size

No change to the core engine or hook up points and a high level of component commonality from Tier 4 Interim to Tier 4 Final, results in minimum equipment change and development costs to upgrade to Tier 4 Final, as well as common equipment configurations for export markets.

### 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 SOSSM 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

## Standard Equipment



### Air Inlet System

- Inlet manifold with choice of inlets.

### Control System

- Alternator 12 volt 65 amp
- Starter motor 12 volt
- Glow plug starting aid

### Cooling System

- Belt-driven coolant pump
- Coolant temperature switch

### Flywheel and Flywheel Housing

- SAE No. 6 1/2 flywheel
- Choice of SAE No. 5 or standard backplate flywheel housing
- U.S. EPA Tier 4 Final: Standard backplate flywheel housing and flatface flywheel

### Fuel System

- Fuel injection pump
- Spin-on fuel filter

### Lube System

- Low profile oil pan
- Spin-on lube oil filter
- Lube oil pressure switch

### Power Take Off (PTO)

- Provision for Power Take Off (PTO)

### General

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

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.