



Caterpillar is leading the power generation marketplace with Power Solutions engineered to deliver unmatched flexibility, expandability, reliability, and cost-effectiveness.

Specifications

Generator Set Specifications

Minimum Rating	230 kVA
Maximum Rating	330 kVA
Voltage	220-480 Volts
Frequency	50 Hz
Speed	1500 RPM

Generator Set Configurations

Emissions/Fuel Strategy	EU Stage IIIA, Low Fuel Consumption, U.S. EPA Certified for Stationary Emergency Use only (Tier 3 Nonroad Equivalent Emission Standards)
-------------------------	---

Engine Specifications

Engine Model	C9 ATAAC, I-6, 4-Stroke Water-Cooled Diesel	
Bore	112 mm	4.41 in
Displacement	8.8 L	537.01 in ³
Stroke	149 mm	5.87 in
Compression Ratio	16.1:1	
Aspiration	Air to Air Aftercooled	
Governor Type	Adem™ A4	
Fuel System	Hydraulic electronic unit injection	

Benefits and Features

Cat Generator Set Packages

Cat® generator set packages have been fully prototype tested, and certified torsional vibration analysis reports are available. The packages are designed to meet the NFPA 110 requirement for loading, and conform to the ISO 8528-5 steady state and transient response requirements.

The four cycle Cat diesel engine combines consistent performance with excellent fuel economy and transient response that meets or exceeds ISO 8528-5. The engines have been designed and built for a wide range of applications and can be optimized for low fuel consumption or low emissions. The engines feature a reliable, rugged, and durable design that has been field proven in thousands of applications worldwide from emergency standby installations to continuously operating power plants.

Cooling System

The cooling system has been designed to operate in standard ambient temperatures up to 50°C (122°F) with an air flow restriction of 0.5 in water. The factory installed cooling system has been designed and tested to ensure proper generator set cooling, and includes the radiator, fan, belts, and all guarding installed as standard. Contact your Cat Dealer for specific ambient and altitude capabilities.

Generators

The generators used on Cat packages have been designed and tested to work with the Cat engine. The generators are built with robust Class H insulation and provide industry leading motor starting capability. They provide high efficiency in a majority of applications and optional coastal protection for the windings is available for harsh environments.

Cat EMCP Control Panel

The EMCP controller features the reliability and durability you have come to expect from your Cat equipment. EMCP4 is a scalable control platform designed to ensure reliable generator set operation, providing extensive information about power output and engine operation. EMCP4 systems can be further customized to meet your needs through programming and expansion modules.

World Wide Product Support

Cat Dealers provide extensive post sale support including maintenance and repair agreements. Cat dealers have over 1,800 dealer branch stores operating in 200 countries. The Caterpillar S•O•SSM program cost effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by-products.

Standard Equipment

Air Inlet System

- Air cleaner, light duty with disposable paper filter

Control Panels

- EMCP4.4 control panel

Cooling System

- Radiator and cooling fan with guard
- Coolant drain line with valve
- Fan drive, battery charging alternator drive
- Caterpillar extended life coolant

Exhaust System

- Stainless steel exhaust flex, gaskets, rain cap and SAE exhaust
- Flange for customer; shipped loose

Fuel System

- Standard open set fuel tank / base supplied
- Base, formed steel with single wall integral 8-hour fuel tank

Generators and Generator Attachments

- 12 leads
- IP23 protection
- Voltage regulator (single phase sensing)
- Power centre, IP22
- Segregated low voltage (AC/DC) wiring panel
- Mandatory option circuit breaker, IEC, 3 pole

Governing System

- Cat electronic governor (ADEM A4)

Lube System

- Oil cooler
- Lubricating oil
- Oil drain valves

Mounting System

- Captive linear vibration isolators between base and engine-generator
- Includes lifting provisions and termination points for coolant and lube oil drain lines

Starting / Charging System

- 24V battery with rack and cables

General

- Engine and alternator re-paint, Caterpillar Yellow

Optional Equipment

Certifications

- European Certifications
- Global Certifications

Air inlet system

- Single element air cleaner

Control Panels

- Volt free contact
- Local alarm horn
- Oil temperature displays
- Earth fault relay
- Earth leakage ground fault relay
- Overload alarm switch
- Low fuel level alarm
- Low fuel level shutdown
- High fuel level alarm
- Fuel level sensor

Control System

SS-9641220-18331028-003

- Stone guard / radiator trans flance
- Low coolant temperature alarm

Enclosures

- High ambient sound attenuated enclosure
- Sound attenuated enclosure

Exhaust System

- Muffler - 10 dBA attenuation
- Muffler - 25 dBA attenuation

Fuel

- Integral duel wall fuel tank base

Generators

- Permanent magnet generator
- LC frame generator

Mounting System

- Narrow skid base

Special Packing / Inspectons for Shipment

- Special tests / reports
- Special packing for shipping
- Special inspections

Starting / Charging

- Battery charger 5 amp single
- Battery removal
- Battery disconnet switch
- Jacket water heater

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.

C9

240 ekW/ 300 kVA/ 50 Hz/ 1500 rpm/ 400 V/ 0.8 Power Factor

Rating Type: STANDBY

Fuel Strategy: LOW FUEL CONSUMPTION



Image shown may not reflect actual configuration

C9

240 ekW/ 300 kVA
 50 Hz/ 1500 rpm/ 400 V

Metric English

Package Performance		
Genset Power Rating with Fan @ 0.8 Power Factor	240 ekW	
Genset Power Rating	300 kVA	
Aftercooler (Separate Circuit)	N/A	N/A

Fuel Consumption		
100% Load with Fan	64.2 L/hr	17.0 gal/hr
75% Load with Fan	48.4 L/hr	12.8 gal/hr
50% Load with Fan	34.4 L/hr	9.1 gal/hr
25% Load with Fan	20.9 L/hr	5.5 gal/hr

Cooling System ¹		
Engine Coolant Capacity	13.9 L	3.7 gal

Inlet Air		
Combustion Air Inlet Flow Rate	16.6 m ³ /min	584.5 cfm
Max. Allowable Combustion Air Inlet Temp	44 ° C	111 ° F

Exhaust System		
Exhaust Stack Gas Temperature	551.1 ° C	1024.1 ° F
Exhaust Gas Flow Rate	48.3 m ³ /min	1704.3 cfm
Exhaust System Backpressure (Maximum Allowable)	10.0 kPa	40.0 in. water



C9

240 ekW/ 300 kVA/ 50 Hz/ 1500 rpm/ 400 V/ 0.8 Power Factor

Rating Type: STANDBY

Fuel Strategy: LOW FUEL CONSUMPTION

Heat Rejection		
Heat Rejection to Jacket Water	115 kW	6565 Btu/min
Heat Rejection to Exhaust (Total)	217 kW	12320 Btu/min
Heat Rejection to Aftercooler	46 kW	2592 Btu/min
Heat Rejection to Atmosphere from Engine	27 kW	1559 Btu/min
Heat Rejection to Atmosphere from Generator	19 kW	1058 Btu/min

Alternator ²	
Motor Starting Capability @ 30% Voltage Dip	586 skVA
Current	433 amps
Frame Size	LC5014J
Excitation	SE
Temperature Rise	163 ° C

Emissions (Nominal) ³		
NOx	3322.7 mg/Nm ³	6.9 g/hp-hr
CO	891.8 mg/Nm ³	1.8 g/hp-hr
HC	11.9 mg/Nm ³	0.0 g/hp-hr
PM	28.4 mg/Nm ³	0.1 g/hp-hr

DEFINITIONS AND CONDITIONS

1. For ambient and altitude capabilities consult your Cat dealer. Air flow restriction (system) is added to existing restriction from factory.
2. UL 2200 Listed packages may have oversized generators with a different temperature rise and motor starting characteristics. Generator temperature rise is based on a 40° C ambient per NEMA MG1-32.
3. Emissions data measurement procedures are consistent with those described in EPA CFR 40 Part 89, Subpart D & E and ISO8178-1 for measuring HC, CO, PM, NOx. Data shown is based on steady state operating conditions of 77° F, 28.42 in HG and number 2 diesel fuel with 35° API and LHV of 18,390 btu/lb. The nominal emissions data shown is subject to instrumentation, measurement, facility and engine to engine variations. Emissions data is based on 100% load and thus cannot be used to compare to EPA regulations which use values based on a weighted cycle.

C9

240 ekW/ 300 kVA/ 50 Hz/ 1500 rpm/ 400 V/ 0.8 Power Factor

Rating Type: STANDBY

Fuel Strategy: LOW FUEL CONSUMPTION

Applicable Codes and Standards:

AS1359, CSA C22.2 No100-04, UL142,UL489, UL869, UL2200,
NFPA37, NFPA70, NFPA99, NFPA110, IBC, IEC60034-1, ISO3046, ISO8528,
NEMA MG1-22,NEMA MG1-33, 2006/95/EC, 2006/42/EC, 2004/108/EC.

Note: Codes may not be available in all model configurations. Please consult your local Cat Dealer representative for availability.

STANDBY:Output available with varying load for the duration of the interruption of the normal source power. Average power output is 70% of the standby power rating. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

Ratings are based on SAE J1349 standard conditions. These ratings also apply at ISO3046 standard conditions

Fuel Rates are based on fuel oil of 35° API [16° C (60° F)] gravity having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 29° C (85° F) and weighing 838.9 g/liter (7.001 lbs/U.S. gal.). Additional ratings may be available for specific customer requirements, contact your Cat representative for details. For information regarding Low Sulfur fuel and Biodiesel capability, please consult your Cat dealer.

www.Cat-ElectricPower.com

Performance No.: EM0877-01

Feature Code: C09DE1M

Generator Arrangement: 4692278

Date: 08/01/2017

Source Country: U.K.

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.