



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	275 ekW (275 kVA)
Maximum Rating	400 ekW (400 kVA)
Voltage	220 to 480 Volts
Frequency	50 or 60 Hz
Speed	1500 or 1800 RPM

Generator Set Configurations	
Emissions/Fuel Strategy	Low Fuel Consumption

Engine Specifications		
Engine Model	3406C TA, I-6, 4-Stroke Water-Cooled Diesel	
Bore	137.2 mm	5.4 in
Displacement	14.64 L	893.39 in3
Stroke	165.1 mm	6.5 in
Compression Ratio	14.5:1	
Aspiration	TA	
Governor Type	Hydra-mechanical	
Fuel System	P&L	

Benefits And Features

Cat Diesel Engine

- Reliable, rugged, durable design
- Field-proven in thousands of applications worldwide
- Four-stroke-cycle diesel engine combines consistent performance and excellent fuel economy with minimum weight

Generator

- Matched to the performance and output characteristics of Cat engines
- Industry leading mechanical and electrical design
- Industry leading motor starting capabilities
- High Efficiency

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.

Design Criteria

The generator set accepts 100% rated load in one step per NFPA 110 and meets ISO 8528-5 transient response.

UL 2200 / CSA - Optional

- UL 2200 listed packages
- CSA Certified
- Certain restrictions may apply.
- Consult with your Cat® Dealer.

Single-Source Supplier

Fully prototype tested with certified torsional vibration analysis available

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 Cat® SOSSM program cost effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by-products.

Standard Equipment

Air Inlet

- Air Cleaner

Cooling

- Package mounted radiator

Exhaust

- Exhaust flange outlet

Fuel

- Primary fuel filter with integral water separator
- Secondary fuel filter
- Fuel priming pump

Generator

- Matched to the performance and output characteristics of Cat engines
- Load adjustment module provides engine relief upon load impact and improves load acceptance and recovery time
- IP23 Protection

Power Termination

- Bus Bar

Control Panel

- EMCP 4 Genset Controller

Mounting

- Rubber vibration isolators

Starting/Charging

- 24 volt starting motor
- Batteries

General

- Paint - Caterpillar Yellow except rails and radiators gloss black

Optional Equipment

Exhaust

- Industrial, Residential, Critical Mufflers

Generator

- Excitation: [] Permanent Magnet Excited (PM) [] Internally Excited (IE)
- Anti-condensation heater
- Oversize and premium generators

Power Termination

- Circuit breakers, UL listed
- Circuit breakers, IEC compliant

Control Panels

- EMCP (4.2) (4.3) (4.4)
- Local & remote annunciator modules
- Load share module
- Digital I/O module
- Remote monitoring software

Starting/Charging

- Battery chargers
- Oversize batteries
- Jacket water heater
- Heavy-duty starting system
- Charging alternator

General

- The following options are based on regional and product configuration:
- Seismic Certification per applicable building codes: IBC 2000, IBC 2003, IBC 2006, IBC 2009, CBC 2007
- UL 2200 package
- EU Certificate of Conformance (CE)
- CSA Certification
- EEC Declaration of Conformity
- Narrow, Wide or Skid Base
- Sound attenuated, weather protective or high ambient weather protective enclosure
- Single or dual wall integral fuel tanks
- Single or dual wall sub-base fuel tanks
- Integral & sub-base UL listed dual wall fuel tanks
- Automatic transfer switches (ATS)



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.

3406C
320 ekW/ 400 kVA/ 60 Hz/ 1800 rpm/ 480 V/ 0.8 Power Factor

Rating Type: PRIME

Fuel Strategy: LOW FUEL CONSUMPTION



3406C
320 ekW/ 400 kVA
60 Hz/ 1800 rpm/ 480 V

Image shown may not reflect actual configuration

Metric English

Package Performance

Genset Power Rating with Fan @ 0.8 Power Factor	320 ekW	
Genset Power Rating	400 kVA	
Aftercooler (Separate Circuit)	78.0 ° C	172.4 ° F

Fuel Consumption

100% Load with Fan	91.6 L/hr	24.2 gal/hr
75% Load with Fan	69.9 L/hr	18.5 gal/hr
50% Load with Fan	50.1 L/hr	13.2 gal/hr
25% Load with Fan	31.1 L/hr	8.2 gal/hr

Cooling System¹

Engine Coolant Capacity	N/A	N/A
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Inlet Air

Combustion Air Inlet Flow Rate	25.5 m ³ /min	899.1 cfm
Max. Allowable Combustion Air Inlet Temp	88 ° C	190 ° F

Exhaust System

Exhaust Stack Gas Temperature	543.6 ° C	1010.5 ° F
Exhaust Gas Flow Rate	72.4 m ³ /min	2556.7 cfm
Exhaust System Backpressure (Maximum Allowable)	6.7 kPa	27.0 in. water



3406C
320 kW/ 400 kVA/ 60 Hz/ 1800 rpm/ 480 V/ 0.8 Power Factor

Rating Type: PRIME

Fuel Strategy: LOW FUEL CONSUMPTION

Heat Rejection		
Heat Rejection to Jacket Water	210 kW	11944 Btu/min
Heat Rejection to Exhaust (Total)	341 kW	19395 Btu/min
Heat Rejection to Aftercooler	31 kW	1775 Btu/min
Heat Rejection to Atmosphere from Engine	73 kW	4124 Btu/min
Heat Rejection to Atmosphere from Generator	22 kW	1245 Btu/min

Alternator²	
Motor Starting Capability @ 30% Voltage Dip	1055 skVA
Current	481 amps
Frame Size	LC6124B
Excitation	AR
Temperature Rise	105 ° C

Emissions (Nominal)³		
NOx	3432.0 mg/Nm ³	7.2 g/hp-hr
CO	944.7 mg/Nm ³	2.1 g/hp-hr
HC	31.7 mg/Nm ³	0.1 g/hp-hr
PM	218.4 mg/Nm ³	0.6 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.

3406C
320 ekW/ 400 kVA/ 60 Hz/ 1800 rpm/ 480 V/ 0.8 Power Factor

Rating Type: PRIME

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, 72/23/EEC, 98/37/EC, 2004/108/EC

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

PRIME:Output available with varying load for an unlimited time. Average power output is 70% of the prime power rating. Typical peak demand is 100% of prime rated ekW with 10% overload capability for emergency use for a maximum of 1 hour in 12. Overload operation cannot exceed 25 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.: DM2270-04

Feature Code: 406DER9

Generator Arrangement: 3381994

Date: 06/09/2015

Source Country: U.S.

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