



Image shown may not reflect actual package.

STANDBY

600 ekW 750 kVA

60 Hz 1800 rpm 480 Volts

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

FEATURES

FUEL/EMISSIONS STRATEGY

- Low Fuel consumption

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.

FULL RANGE OF ATTACHMENTS

- Wide range of bolt-on system expansion attachments, factory designed and tested
- Flexible packaging options for easy and cost effective installation

SINGLE-SOURCE SUPPLIER

- Fully prototype tested with certified torsional vibration analysis available

WORLDWIDE 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® S•O•SSM program cost effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by-products

CAT ® C18 ATAAC DIESEL ENGINE

- Utilizes ACERT™ Technology
- 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
- Electronic controlled governor

CAT 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
- UL 1446 Recognized Class H insulation

CAT EMCP 4 CONTROL PANELS

- Simple user friendly interface and navigation
- Scalable system to meet a wide range of customer needs
- Integrated Control System and Communications Gateway

STANDBY 600 ekW 750 kVA

60 Hz 1800 rpm 480 Volts



FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

System	Standard	Optional
Air Inlet	• Air cleaner	
Cooling	• Package mounted radiator	
Exhaust	• Exhaust flange outlet	☐ Industrial ☐ Residential ☐ Critical Mufflers
Fuel	• Primary fuel filter with integral water separator • Secondary fuel filters • 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	☐ Oversize and premium generators ☐ Permanent magnet excitation (PMG) ☐ Internal excited (IE) ☐ Anti-condensation space heaters
Power Termination	• Bus bar	☐ Circuit breakers, UL listed ☐ Circuit breakers, IEC compliant
Control Panel	• EMCP 4 Genset Controller	☐ EMCP 4.2 ☐ EMCP 4.3 ☐ EMCP 4.4 ☐ Local and remote annunciator modules ☐ Load share module ☐ Digital I/O module ☐ Remote monitoring software
Mounting	• Rubber vibration isolators	
Starting/Charging	• 24 volt starting motor • Batteries	☐ Battery chargers ☐ Oversize batteries ☐ Jacket water heater ☐ Heavy duty starting system ☐ Charging alternator
General	• Paint - Caterpillar Yellow except rails and radiators gloss black	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 enclosures ☐ 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)

STANDBY 600 ekW 750 kVA

60 Hz 1800 rpm 480 Volts



SPECIFICATIONS

CAT GENERATOR

Frame size.....LC7024F
Excitation.....Internal Excitation
Pitch.....0.6667
Number of poles.....4
Number of bearings.....Single bearing
Number of Leads.....012
Insulation.....UL 1446 Recognized Class H with
tropicalization and antiabrasion
- Consult your Caterpillar dealer for available voltages
IP Rating.....Drip Proof IP23
Alignment.....Pilot Shaft
Overspeed capability.....125
Wave form Deviation (Line to Line).....2%
Voltage regulator.....Three phase sensing
Voltage regulation.....Less than +/- 1/2% (steady state)
Less than +/- 1/2% (w/ 3% speed change)

CAT DIESEL ENGINE

C18 ATAAC, I-6, 4-Stroke Water-cooled Diesel
Bore.....145.00 mm (5.71 in)
Stroke.....183.00 mm (7.2 in)
Displacement.....18.13 L (1106.36 in³)
Compression Ratio.....14.5:1
Aspiration.....Air-to-Air Aftercooled
Fuel System.....Electronic unit injection
Governor Type.....Caterpillar ADEM control system

CAT EMCP 4 SERIES CONTROLS

EMCP 4 controls including:

- Run / Auto / Stop Control
- Speed and Voltage Adjust
- Engine Cycle Crank
- 24-volt DC operation
- Environmental sealed front face
- Text alarm/event descriptions

Digital indication for:

- RPM
- DC volts
- Operating hours
- Oil pressure (psi, kPa or bar)
- Coolant temperature
- Volts (L-L & L-N), frequency (Hz)
- Amps (per phase & average)
- ekW, kVA, kVAR, kW-hr, %kW, PF (4.2 only)

Warning/shutdown with common LED indication of:

- Low oil pressure
- High coolant temperature
- Overspeed
- Emergency stop
- Failure to start (overcrank)
- Low coolant temperature
- Low coolant level

Programmable protective relaying functions:

- Generator phase sequence
- Over/Under voltage (27/59)
- Over/Under Frequency (81 o/u)
- Reverse Power (kW) (32) (4.2 only)
- Reverse reactive power (kVAr) (32RV)
- Overcurrent (50/51)

Communications:

- Four digital inputs (4.1)
- Six digital inputs (4.2 only)
- Four relay outputs (Form A)
- Two relay outputs (Form C)
- Two digital outputs
- Customer data link (Modbus RTU) (4.2 only)
- Accessory module data link (4.2 only)
- Serial annunciator module data link (4.2 only)
- Emergency stop pushbutton

Compatible with the following:

- Digital I/O module
- Local Annunciator
- Remote CAN annunciator
- Remote serial annunciator

STANDBY 600 ekW 750 kVA

60 Hz 1800 rpm 480 Volts



TECHNICAL DATA

Open Generator Set - - 1800 rpm/60 Hz/480 Volts	DM9838	
Low Fuel Consumption		
Generator Set Package Performance Genset Power rating @ 0.8 pf Genset Power rating with fan	750 kVA 600 ekW	
Fuel Consumption 100% load with fan 75% load with fan 50% load with fan	163.0 L/hr 119.5 L/hr 81.1 L/hr	43.1 Gal/hr 31.6 Gal/hr 21.4 Gal/hr
Cooling System ¹ Air flow restriction (system) Engine Coolant capacity with radiator/exp. tank Engine coolant capacity Radiator coolant capacity	0.12 kPa 81.8 L 20.8 L 61.0 L	0.48 in. water 21.6 gal 5.5 gal 16.1 gal
Inlet Air Combustion air inlet flow rate	48.7 m ³ /min	1719.8 cfm
Exhaust System Exhaust stack gas temperature Exhaust gas flow rate Exhaust flange size (internal diameter) Exhaust system backpressure (maximum allowable)	511.4 ° C 132.3 m ³ /min 203 mm 10.0 kPa	952.5 ° F 4672.1 cfm 8 in 40.2 in. water
Heat Rejection Heat rejection to coolant (total) Heat rejection to exhaust (total) Heat rejection to aftercooler Heat rejection to atmosphere from engine Heat rejection to atmosphere from generator	181 kW 615 kW 152 kW 111 kW 41.0 kW	10293 Btu/min 34975 Btu/min 8644 Btu/min 6313 Btu/min 2331.7 Btu/min
Alternator ² Motor starting capability @ 30% voltage dip Frame Temperature Rise	1633 skVA LC7024F 150 ° C	270 ° F
Lube System Sump refill with filter	38.0 L	10.0 gal
Emissions (Nominal) ³ NOx g/hp-hr CO g/hp-hr HC g/hp-hr PM g/hp-hr	5.47 g/hp-hr .14 g/hp-hr .01 g/hp-hr .014 g/hp-hr	

¹ For ambient and altitude capabilities consult your Cat dealer. Air flow restriction (system) is added to existing restriction from factory.

² Generator temperature rise is based on a 40° C (104° F) ambient per NEMA MG1-32. Some packages may have oversized generators with a different temperature rise and motor starting characteristics.

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.

STANDBY 600 ekW 750 kVA

60 Hz 1800 rpm 480 Volts



RATING DEFINITIONS AND CONDITIONS

Meets or Exceeds International Specifications: AS1359, CSA, IEC60034-1, ISO3046, ISO8528, NEMA MG 1-22, NEMA MG 1-33, UL508A, 72/23/EEC, 98/37/EC, 2004/108/EC

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.

STANDBY 600 ekW 750 kVA

60 Hz 1800 rpm 480 Volts



DIMENSIONS

Package Dimensions	
Length	Information not available at this time.
Width	
Height	

NOTE: For reference only - do not use for installation design. Please contact your local dealer for exact weight and dimensions. (General Dimension Drawing #3728295).

Performance No.: DM9838

Feature Code: C18DE4K

Gen. Arr. Number: 2476127

Source: U.S. Sourced

February 08 2013

21377074

www.Cat-ElectricPower.com

2013 Caterpillar
All rights reserved.

Materials and specifications are subject to change without notice.
The International System of Units (SI) is used in this publication.

CAT, CATERPILLAR, their respective logos, "Caterpillar Yellow," 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.