



Image shown may not reflect actual package.

ESP

**550 kW 688 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

- EPA Certified for Stationary Emergency Application (EPA Tier 2 emissions levels)

RATING

- Rated for Emergency Standby Power (ESP) per ISO8528 • 200 Hours / year operation

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® C15 ATAAC DIESEL ENGINE

- Utilizes ACERT™ Technology
- Reliable, rugged, durable design
- Field-proven in thousands of applications worldwide
- Four-stroke diesel engine combines consistent performance and excellent fuel economy with minimum weight
- Electronic engine control

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

SEISMIC CERTIFICATION

- Seismic Certification available
- Anchoring details are site specific, and are dependent on many factors such as generator set size, weight, and concrete strength. IBC Certification requires that the anchoring system used is reviewed and approved by a Professional Engineer
- Seismic Certification per Applicable Building Codes: IBC 2000, IBC 2003, IBC 2006, IBC 2009, CBC 2007
- Pre-approved by OSHPD and carries an OSP-0084-10 for use in healthcare projects in California

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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)

SPECIFICATIONS

CAT GENERATOR

Frame size..... LC6114G
Excitation..... Self 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

C15 ATAAC, I-6, 4-Stroke Water-cooled Diesel
Bore..... 137.20 mm (5.4 in)
Stroke..... 171.40 mm (6.75 in)
Displacement..... 15.20 L (927.56 in³)
Compression Ratio..... 16.1:1
Aspiration..... Air-to-Air Aftercooled
Fuel System..... MEUI
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

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TECHNICAL DATA

Open Generator Set - - 1800 rpm/60 Hz/480 Volts		DM8157	
EPA Certified for Stationary Emergency Application (EPA Tier 2 emissions levels)			
Generator Set Package Performance Genset Power rating @ 0.8 pf Genset Power rating with fan		687.5 kVA 550 ekW	
Fuel Consumption 100% load with fan 75% load with fan 50% load with fan		153.8 L/hr 115.6 L/hr 90.5 L/hr	40.6 Gal/hr 30.5 Gal/hr 23.9 Gal/hr
Cooling System¹ Air flow restriction (system) Air flow (max @ rated speed for radiator arrangement) Engine Coolant capacity with radiator/exp. tank Engine coolant capacity Radiator coolant capacity		0.12 kPa 822 m ³ /min 57.8 L 20.8 L 37.0 L	0.48 in. water 29029 cfm 15.3 gal 5.5 gal 9.8 gal
Inlet Air Combustion air inlet flow rate		44.0 m ³ /min	1553.8 cfm
Exhaust System Exhaust stack gas temperature Exhaust gas flow rate Exhaust flange size (internal diameter) Exhaust system backpressure (maximum allowable)		514.4 ° C 121.8 m ³ /min 152.4 mm 10.0 kPa	957.9 ° F 4301.3 cfm 6.0 in 40.2 in. water
Heat Rejection Heat rejection to coolant (total) Heat rejection to exhaust (total) Heat rejection to atmosphere from engine Heat rejection to atmosphere from generator		207 kW 567 kW 85 kW 32.6 kW	11772 Btu/min 32245 Btu/min 4834 Btu/min 1854.0 Btu/min
Alternator² Motor starting capability @ 30% voltage dip Frame Temperature Rise		1445 skVA LC6114G 130 ° C	234 ° F
Lube System Sump refill with filter		60.0 L	15.9 gal
Emissions (Nominal)³ NOx g/hp-hr CO g/hp-hr HC g/hp-hr PM g/hp-hr		5.07 g/hp-hr .29 g/hp-hr .01 g/hp-hr .018 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.

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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

Emergency Standby Power (ESP) - Output available with varying load for the duration of an emergency outage. Average power output is 70% of the standby power rating. Typical operation is 50 hours per year, with maximum expected usage of 200 hours per year.

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

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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 #2781052).

Performance No.: DM8157

Feature Code: C15DE6V

Gen. Arr. Number: 2351215

Source: U.S. Sourced

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