



Image shown may not reflect actual package.

STANDBY

**300 kW 375 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 Tier 3

DESIGN CRITERIA

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

UL 2200

- UL 2200 listed packages available. Certain restrictions may apply. Consult with your Caterpillar 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

- Caterpillar® dealers provide extensive post sale support including maintenance and repair agreements
- Caterpillar dealers have over 1,600 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® C9 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
- ADEM™A4 electronic engine control

CAT GENERATOR

- Matched to the performance and output characteristics of Caterpillar 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 3 SERIES CONTROL PANELS

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

FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

System	Standard	Optional
Air Inlet	<ul style="list-style-type: none"> • Light Duty Air filter 	<ul style="list-style-type: none"> • Dual element & heavy duty air cleaners
Cooling	<ul style="list-style-type: none"> • Radiator package mounted(50°C) • Coolant level sight gauge • Coolant drain line with valve • Fan and belt guards • Caterpillar Extended Life Coolant 	<ul style="list-style-type: none"> • Radiator duct flange
Exhaust	<ul style="list-style-type: none"> • Dry exhaust manifold 	<ul style="list-style-type: none"> • Mufflers • Stainless steel exhaust flex with split cuff connectors • Elbows
Fuel	<ul style="list-style-type: none"> • Primary fuel filter with integral water separator • Secondary fuel filters • Fuel cooler • Fuel priming pump • Engine fuel transfer pump 	<ul style="list-style-type: none"> • Integral UL listed fuel tank bases • Flex fuel line • Fuel level switch
Generator	<ul style="list-style-type: none"> • Class H insulation • Class H Temperature Rise • R448 voltage regulator with load adjustment module • IP23 Protection • Power Center • Single phase sensing 	<ul style="list-style-type: none"> • Oversize and premium generators • Three phase sensing • Digital voltage regulator with KVAR/PF control • Anti-condensation space heaters • Cable access box • Reactive droop
Power Termination	<ul style="list-style-type: none"> • Bus-bar connection inside generator (NEMA pattern) 	<ul style="list-style-type: none"> • Circuit breakers, UL listed, 3 pole • Circuit breakers, IEC compliant, 3-4 pole • Power terminal strip connections in power center • Shunt trip • Auxiliary contacts
Governor	<ul style="list-style-type: none"> • ADEM™A4 	<ul style="list-style-type: none"> • Load share module
Control Panels	<ul style="list-style-type: none"> • EMCP 3.1 (mounted inside power center) • Rear facing • Speed adjust • Emergency stop pushbutton • Voltage adjustment 	<ul style="list-style-type: none"> • EMCP 3.2 & EMCP 3.3 • Right-hand mounting of control panel • Local annunciator modules (NFPA 99/110) • Remote annunciator modules (NFPA 99/110) • Discrete I/O module
Lube	<ul style="list-style-type: none"> • Lubricating oil and filter • Oil drain line with valves • Fumes disposal • Lube oil level indicator 	<ul style="list-style-type: none"> • Oil temperature sensor • Manual sump pump
Mounting	<ul style="list-style-type: none"> • Formed steel wide base frame • Linear vibration isolation-seismic zone 4 	<ul style="list-style-type: none"> • Oil field skid base • Formed steel wide base frame
Starting/Charging	<ul style="list-style-type: none"> • 24 volt starting motor • 45 amp charging alternator 	<ul style="list-style-type: none"> • Jacket water heater with shut off valves • Block heater • Ether starting aids • Battery disconnect switch • Battery charger(5A,10A) • Oversize batteries • Batteries with rack and cables
General	<ul style="list-style-type: none"> • Paint - Caterpillar yellow except rails and radiators gloss black • Flywheel and flywheel housing - SAE No.1 	<ul style="list-style-type: none"> • UL 2200 packages

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SPECIFICATIONS

CAT GENERATOR

Frame size.....LC5014J
Excitation.....Self Excited
Pitch.....0.6667
Number of poles.....4
Number of bearings.....1
Number of leads.....12
Insulation.....UL 1446 Recognized Class H with tropicalization and antiabrasion
- Consult your Caterpillar dealer for available voltages
IP rating.....IP23
Alignment.....Pilot Shaft
Overspeed capability.....125% of rated
Wave form deviation (Line to Line).....2%
Voltage regulator.....Single phase sensing
Voltage Regulation.. Less than +/- 1/2% (steady state) Less than +/- 1% (no load to full load)
Telephone Influence Factor.....Less than 50
Harmonic distortion.....Less than 5%

CAT DIESEL ENGINE

C9 ATAAC, I-6, 4-stroke-cycle watercooled diesel
Bore - mm.....112.00 mm (4.41 in)
Stroke - mm.....149.00 mm (5.87 in)
Displacement - L.....8.80 L (537.01 in³)
Compression ratio.....16.1:1
Aspiration.....Turbocharged Air-to-Air Aftercooled
Fuel system.....HUEI
Governor type.....Caterpillar ADEM control system

CAT EMCP 3 CONTROL PANELS

- EMCP 3.1 (Standard)
- EMCP 3.2 / EMCP 3.3 (Option)
- Single location customer connector point
- True RMS metering, 3-phase
- Controls
 - Run / Auto / Stop control
 - Speed Adjust
 - Voltage Adjust
 - Emergency Stop Pushbutton
 - Engine cycle crank
- Digital Indication for:
 - RPM
 - Operating hours
 - Oil Pressure
 - Coolant temperature
 - System DC volts
 - L-L volts, L-N volts, phase amps, Hz
 - ekW, kVA, kVAR, kW-hr, %kW, PF (EMCP 3.2 / 3.3)
- Shutdowns with common indicating light for:
 - Low oil pressure
 - High coolant temperature
 - Low coolant level
 - Overspeed
 - Emergency stop
 - Failure to start (overcrank)
- Programmable protective relaying functions: (EMCP 3.2 & 3.3)
 - Under and over voltage
 - Under and over frequency
 - Overcurrent (time and inverse time)
 - Reverse power (EMCP 3.3)
- MODUS isolated data link (RS-485 half-duplex EMCP 3.2 & 3.3)
- Options
 - Vandal door
 - Local annunciator module
 - Remote annunciator module
 - Input / Output module
 - RTD / Thermocouple Modules
 - Monitoring software

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TECHNICAL DATA

Open Generator Set - - 1800 rpm/60 Hz/480 Volts	DM8168	
Tier 3		
Generator Set Package Performance Genset Power rating @ 0.8 pf Genset Power rating with fan	375 kVA 300 ekW	
Coolant to aftercooler Coolant to aftercooler temp max	49 ° C	120 ° F
Fuel Consumption 100% load with fan 75% load with fan 50% load with fan	86.1 L/hr 66.7 L/hr 51.3 L/hr	22.7 Gal/hr 17.6 Gal/hr 13.6 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 497 m ³ /min 36.0 L 22.0 L 14.0 L	0.48 in. water 17551 cfm 9.5 gal 5.8 gal 3.7 gal
Inlet Air Combustion air inlet flow rate	25.7 m ³ /min	907.6 cfm
Exhaust System Exhaust stack gas temperature Exhaust gas flow rate Exhaust flange size (internal diameter) Exhaust system backpressure (maximum allowable)	499.5 ° C 69.7 m ³ /min 170 mm 5.9 kPa	931.1 ° F 2461.4 cfm 7 in 23.7 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	121 kW 309 kW 89 kW 43 kW 21.9 kW	6881 Btu/min 17573 Btu/min 5061 Btu/min 2445 Btu/min 1245.5 Btu/min
Alternator² Motor starting capability @ 30% voltage dip Frame Temperature Rise	682 skVA LC5014J 150 ° C	270 ° F
Lube System Sump refill with filter	40.0 L	10.6 gal
Emissions (Nominal)³ NOx g/hp-hr CO g/hp-hr HC g/hp-hr PM g/hp-hr	4.11 g/hp-hr .25 g/hp-hr .06 g/hp-hr .033 g/hp-hr	

¹ For ambient and altitude capabilities consult your Caterpillar 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.

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

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. Standby power in accordance with ISO8528. Fuel stop power in accordance with ISO3046. Standby ambients shown indicate ambient temperature at 100% load which results in a coolant top tank temperature just below the shutdown temperature.

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 Caterpillar representative for details. For information regarding Low Sulfur fuel and Biodiesel capability, please consult your Caterpillar dealer.

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DIMENSIONS

Package Dimensions		
Length	3292.0 mm	129.61 in
Width	1112.3 mm	43.79 in
Height	1844.5 mm	72.62 in
Weight	2287 kg	5,042 lb

NOTE: For reference only - do not use for installation design. Please contact your local dealer for exact weight and dimensions. (General Dimension Drawing #2778059).

Performance No.: DM8168

Feature Code: C09DE03

Gen. Arr. Number: 2377184

Source: U.S. Sourced

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