DIESEL GENERATOR SET

CATERPILLAR®

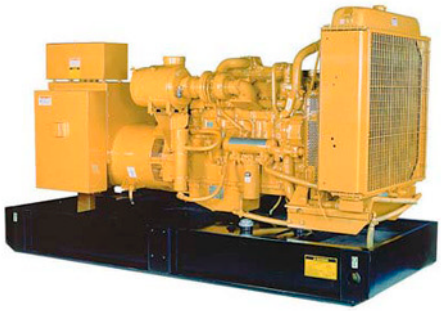

Image shown may not reflect actual package.

STANDBY
280 ekW 350 kVA
50 Hz 1500 rpm 400 Volts

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

FEATURES

Fuel Strategy
- Low fuel consumption

FULL RANGE OF ATTACHMENTS
- Wide range of bolt-on system expansion attachments, factory designed and tested

ENCLOSURES (optional)
- Weather protective and sound attenuated

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® 3406C TA DIESEL ENGINE
- High efficiency, four-stroke-cycle engine designed for thousands of trouble-free hours of operation
- Field-proven in thousands of applications

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
- 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	• Service Indicator • Light duty air cleaner	Canister Style Air Cleaner • Single Stage • Dual element • Heavy duty
Cooling	• Coolant drain line with valve • Fan and belt guards • Radiator with guard	• Low coolant level alarm or shutdown • Heat exchanger and expansion tank • Jacket water heater • Oversize radiator • Duct flange • Caterpillar Extended Life Coolant
Exhaust	• Dry exhaust manifold • Flanged outlet	• Industrial muffler • Residential muffler • Critical muffler • Flexible fitting
Fuel	• Fuel priming pump • Fuel pressure gauge	• Water separator • Day tanks • Flexible fuel lines
Governor	• Hydra-mechanical	• Woodward 1724 • Load sharing module
Control Panels	• EMCP3.1 • User Interface panel (UIP) - rear mount (standard) • Voltage and Speed adjust • AC&DC customer wiring area (right side) • CAT digital voltage regulator (CDVR) with KVAR/PF control, 3-phase sensing • Emergency Stop Pushbutton	• EMCP 3.2, EMCP 3.3 • Local alarm horn • Common alarm/shutdown relay • Local & remote annunciator modules • Load share module • Discrete I/O module • Generator temperature monitoring & protection • Speed Adjust (on panel)
Lube	• Lubricating oil and filter • Oil drain line with valve piped to edge of base • Fumes disposal piped to front of radiator	• Manual sump pump • Oil temperature sensor
Starting/Charging	• 45 amp charging alternator • Energized to Run (ETR) fuel shutoff solenoid • 24 volt starting motor • Batteries with rack and cables	• 5 amp battery charger • Oversize batteries • Ether starting aid • Battery disconnect switch

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SPECIFICATIONS

CAT GENERATOR

Frame Size.....LC6114B
Excitation.....Self Excited
Pitch.....0.6667
Number of poles.....4
Number of bearings..... Single Bearing
Insulation..... UL 1446 Recognized Class H with tropicalization and antiabrasion
IP Rating.....IP23
Overspeed capability - % of rated..... 150
Wave form.....002.00
Paralleling kit/Droop transformer..... Optional
Voltage regulator..... Single Phase sensing with selectible volts/Hz
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

3406C TA, I-6, 4-Stroke-Cycle Watercooled Diesel
Bore - mm..... 137.20 mm (5.4 in)
Stroke - mm..... 165.10 mm (6.5 in)
Displacement - L..... 14.64 L (893.39 in^3)
Compression ratio..... 14.5:1
Aspiration.....TA
Governor type..... Hydra-mechanical

CAT CONTROL PANELS

EMCP 3.1 (Standard)
EMCP 3.2 & 3.3 (Optional features)
- Emergency stop pushbutton
- Voltage adjustment potentiometer
- Digital speed adjustment (via EMCP3 display)
- Panel illuminating lights
- Digital AC metering 3-phase, true RMS
- Digital Indication for:
  - RPM
  - DC volts
  - Operating hours
  - Oil Pressure (psi, kPa or bar)
  - Coolant temperature
  - L-L volts, L-N volts, phase amps, Hz
  - ekW, kVa, kVAR, kW-hr, % kW, PF
- Warning / Shutdowns with indicating lights for:
  - Low oil pressure
  - High Coolant temperature
  - Overspeed
  - Emergency Stop
  - Failure to start (overcrank)
- Programmable digital (4) inputs and (4) outputs
- Reverse power (optional)
- MODBUS isolated data link (RS-485 half-duplex) supports serial communication at data rate up to 115.2 kbaud (optional)

Consult your Caterpillar Dealer for details

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TECHNICAL DATA

Open Generator Set - - 1500 rpm/50 Hz/400 Volts	DM2269	
Low Fuel Consumption		
Generator Set Package Performance		
Genset Power rating @ 0.8 pf	350 kVA	
Genset Power rating with fan	280 ekW	
Fuel Consumption		
100% load with fan	79.6 L/hr	21.0 Gal/hr
75% load with fan	60.6 L/hr	16.0 Gal/hr
50% load with fan	42.6 L/hr	11.3 Gal/hr
Cooling System[1]		
Air flow restriction (system)	0.12 kPa	0.48 in. water
Air flow (max @ rated speed for radiator arrangement)	522 m³/min	18434 cfm
Engine Coolant capacity with radiator/exp. tank	57.8 L	15.3 gal
Engine coolant capacity	20.8 L	5.5 gal
Radiator coolant capacity	37.0 L	9.8 gal
Inlet Air		
Combustion air inlet flow rate	19.8 m³/min	699.2 cfm
Exhaust System		
Exhaust stack gas temperature	596.8 ° C	1106.2 ° F
Exhaust gas flow rate	60.4 m³/min	2133.0 cfm
Heat rejection to aftercooler	19 kW	1081 Btu/min
Exhaust flange size (internal diameter)	152.4 mm	6.0 in
Exhaust system backpressure (maximum allowable)	6.7 kPa	26.9 in. water
Heat rejection		
Heat rejection to coolant (total)	183 kW	10407 Btu/min
Heat rejection to exhaust (total)	297 kW	16890 Btu/min
Heat rejection to atmosphere from engine	65 kW	3697 Btu/min
Heat rejection to atmosphere from generator	19.8 kW	1126.0 Btu/min
Alternator[2]		
Motor starting capability @ 30% voltage dip	745 skVA	
Frame	LC6114B	
Temperature Rise	130 ° C	234 ° F
Lube System		
Sump refill with filter	38.0 L	10.0 gal
Emissions[3]		
NOx mg/nm3	4261.3 mg/nm³	
CO mg/nm3	1721.9 mg/nm³	
HC mg/nm3	24.1 mg/nm³	
NOx mg/nm3	4261.3 mg/nm³	

[1] For ambient and altitude capabilities consult your Caterpillar 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 40ºC 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 77ºF, 28.42 in HG and number 2 diesel fuel with 35º 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.

RATING DEFINITIONS AND CONDITIONS

Meets or Exceeds International Specifications: AS1359, CSA, IEC60034, ISO 3046, ISO 8528, NEMA MG 1-33, UL508A, 98/37/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 ISO 8528. Fuel stop power in accordance with ISO 3046. 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 ISO 3046 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	**4264.3 mm**	**167.89 in**
Width	**1110.0 mm**	**43.7 in**
Height	**2150.0 mm**	**84.65 in**
Weight	**3321 kg**	**7,322 lb**

NOTE: For reference only - do not use for installation design. Please contact your local dealer for exact weight and dimensions. (General Dimension Drawing #3202728).

Performance No.: DM2269

Feature Code: 406DET9

Gen. Arr. Number: 2351203

Source: U.S. Sourced

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