



Image shown may not reflect actual package.

## PRIME

**256 kW 320 kVA  
50 Hz 1500 rpm 415 Volts**

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

## FEATURES

### FULL RANGE OF ATTACHMENTS

- Wide range of bolt-on system expansion attachments, factory designed and tested

### COMPLETE, READY-TO-RUN SYSTEM

- Fully configured generator set
- Full range of attachments and options available

### ENCLOSURES (optional)

- Weather protective and sound attenuated

### SINGLE-SOURCE SUPPLIER

- Factory-designed systems built at Caterpillar ISO 9001:2000 certified facilities
- 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 fill 99.7% of parts orders within 24 hours
- Caterpillar dealers have over 1,600 dealer branch stores operating in 200 countries
- The Cat® S•O•S<sup>SM</sup> 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 SR4B GENERATOR

- Matched to the performance and output characteristics of Caterpillar engines
- Optimum winding pitch for minimum total harmonic distortion and maximum efficiency
- Segregated low voltage, AC/DC accessory box provides single point access to accessory connections
- UL 1446 Recognized Class H insulation

### CAT EMCP 3 SERIES CONTROL

Three levels of controls to meet individual customer needs:

- EMCP3.1 offers basic engine/generator monitoring, metering and protection.
- EMCP 3.2 provides comprehensive monitoring, metering and protection including: power metering, protective relaying, and MODBUS communication.
- Segregated low voltage (AC/DC) accessory box provides single point access to accessory connections.

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## FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

System	Standard	Optional
Air Inlet	<ul style="list-style-type: none"> <li>• Single element canister type air cleaner</li> <li>• Service indicator</li> </ul>	<ul style="list-style-type: none"> <li>• Dual element air cleaner</li> <li>• Heavy-duty air cleaner</li> <li>• Air inlet shutoff</li> </ul>
Cooling	<ul style="list-style-type: none"> <li>• Radiator with guard</li> <li>• Coolant drain line with valve</li> <li>• Fan and belt guards</li> <li>• Caterpillar Extended Life Coolant</li> </ul>	<ul style="list-style-type: none"> <li>• Radiator duct flange</li> <li>• Jacket water heater with shutoff valves</li> <li>• Low coolant level alarm or shutdown</li> <li>• Heat exchanger and expansion tank</li> </ul>
Exhaust	<ul style="list-style-type: none"> <li>• Stainless steel exhaust flex and ANSI outlet flange</li> <li>• 10 dBA muffler</li> </ul>	<ul style="list-style-type: none"> <li>• 25 dBA muffler</li> <li>• 35 dBA muffler</li> <li>• Elbow kit and through-wall installation kit</li> <li>• Manifold and turbocharger guards</li> </ul>
Fuel	<ul style="list-style-type: none"> <li>• Primary and secondary fuel filters</li> <li>• Fuel priming pump</li> <li>• Flexible fuel lines</li> <li>• Fuel pressure gauge</li> </ul>	<ul style="list-style-type: none"> <li>• Water separator</li> <li>• Manual transfer pump</li> <li>• (3) Automatic transfer systems to choose from</li> <li>• Low fuel level alarm</li> </ul>
Generator	<ul style="list-style-type: none"> <li>• Self excited</li> <li>• Class H insulation</li> <li>• Class F temperature rise (105°C prime/130°C standby)</li> <li>• VR3 Voltage Regulator, 3-phase sensing</li> <li>• Circuit breaker, IEC compliant, 3-pole with shunt trip</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent magnet excited</li> <li>• 2:1 Volts/Hz AVR</li> <li>• Digital Voltage Regulator</li> <li>• Digital Voltage Regulator with KVAR/PF control</li> <li>• Anti-condensation space heater</li> <li>• Reactive droop</li> <li>• Oversize and premium generators (except 292 kW Prime/320 kW Standby)</li> <li>• Circuit breaker, IEC Compliant, 4-pole with shunt trip</li> </ul>
Governor	<ul style="list-style-type: none"> <li>• Hydra-mechanical</li> </ul>	<ul style="list-style-type: none"> <li>• Woodward 1724</li> <li>• Electronic isochronous</li> <li>• Electronic load sharing</li> <li>• Governor control motor</li> </ul>
Control Panels	<ul style="list-style-type: none"> <li>• EMCP II</li> </ul>	<ul style="list-style-type: none"> <li>• Electromechanical auto start/stop panel</li> <li>• EMCP II+</li> <li>• Switchgear conversion</li> <li>• Customer Communication Module</li> <li>• Local alarm and remote annunciator modules</li> </ul>
Lube	<ul style="list-style-type: none"> <li>• Lubricating oil and filter</li> <li>• Oil drain line with valves</li> <li>• Fumes disposal</li> </ul>	<ul style="list-style-type: none"> <li>• Manual sump pump</li> </ul>
Mounting	<ul style="list-style-type: none"> <li>• Formed steel base with integral fuel tank, 8 hour capacity minimum</li> <li>• Linear vibration isolators between base and engine-generator</li> </ul>	<ul style="list-style-type: none"> <li>• Wide base with integral fuel tank</li> <li>• Extended capacity fuel tank base</li> <li>• Skid base</li> </ul>
Starting/Charging	<ul style="list-style-type: none"> <li>• 45 amp charging alternator</li> <li>• Energized to Run (ETR) fuel shutoff solenoid</li> <li>• 24 volt starting motor</li> <li>• Batteries with rack and cables</li> </ul>	<ul style="list-style-type: none"> <li>• 5 amp battery charger</li> <li>• Oversize batteries</li> <li>• Ether starting aid</li> <li>• Battery disconnect switch</li> </ul>
General		<ul style="list-style-type: none"> <li>• Enclosures - sound attenuated, weather protective</li> <li>• Automatic transfer switches (ATS)</li> <li>• EU Certificate of Conformance (CE)</li> </ul>

## SPECIFICATIONS

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### CAT GENERATOR

Frame Size.....LC6134B  
 Excitation.....Permanent Magnet  
 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  
 Alignment..... Pilot Shaft  
 Overspeed capability - % of rated..... 150  
 Wave form.....002.00  
 Paralleling kit/Droop transformer..... Optional  
 Voltage regulator.....3 Phase sensing with 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<sup>3</sup>)  
 Compression ratio..... 14.5:1  
 Aspiration..... TA  
 Governor type..... Hydra-mechanical

### CAT CONTROL PANELS

- EMCP II
- 24 Volt DC Control
- NEMA 1, IP22 enclosure
- Electronically dead front
- Lockable hinged door
- Generator instruments meet ANSI C-39-1
- Terminal box mounted
- Single location customer connection point
- EU compliant - segregated AC/DC connections
- Panel illuminating lights
- Auto start/stop control
- Voltage adjust potentiometer
- True RMS AC metering
- Digital indications for:
  - RPM
  - Operating hours
  - Oil pressure
  - Coolant temperature
  - System DC volts
  - AC volts, phase amps, Hz
- Shutdowns with indicating lights for:
  - Low oil pressure
  - High coolant temperature
  - Overspeed
  - Emergency stop
  - Failure to start (overcrank)

**TECHNICAL DATA**

Open Generator Set - - 1500 rpm/50 Hz/415 Volts	DM2268	
<b>Low Fuel Consumption</b>		
<b>Generator Set Package Performance</b>		
Genset Power rating @ 0.8 pf	320 kVA	
Genset Power rating with fan	256 kW	
<b>Fuel Consumption</b>		
100% load with fan	73.0 L/hr	19.3 Gal/hr
75% load with fan	56.0 L/hr	14.8 Gal/hr
50% load with fan	39.6 L/hr	10.5 Gal/hr
<b>Cooling System<sup>1</sup></b>		
Ambient air temperature	55 ° C	131 ° F
Air flow restriction (system)	0.12 kPa	0.48 in. water
Air flow (max @ rated speed for radiator arrangement)	522 m <sup>3</sup> /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
<b>Inlet Air</b>		
Combustion air inlet flow rate	18.4 m <sup>3</sup> /min	649.8 cfm
<b>Exhaust System</b>		
Exhaust stack gas temperature	588.1 ° C	1090.6 ° F
Exhaust gas flow rate	55.7 m <sup>3</sup> /min	1967.0 cfm
Heat rejection to aftercooler	14 kW	796 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
<b>Heat rejection</b>		
Heat rejection to coolant (total)	169 kW	9611 Btu/min
Heat rejection to exhaust (total)	274 kW	15582 Btu/min
Heat rejection to atmosphere from engine	57 kW	3242 Btu/min
Heat rejection to atmosphere from generator	17.2 kW	978.2 Btu/min
<b>Alternator<sup>2</sup></b>		
Motor starting capability @ 30% voltage dip	956 skVA	
Frame	LC6134B	
Temperature Rise	105 ° C	189 ° F
<b>Lube System</b>		
Sump refill with filter	38.0 L	10.0 gal
<b>Emissions<sup>3</sup></b>		
NOx mg/nm <sup>3</sup>	4659.7 mg/nm <sup>3</sup>	
CO mg/nm <sup>3</sup>	1194.8 mg/nm <sup>3</sup>	
HC mg/nm <sup>3</sup>	27.7 mg/nm <sup>3</sup>	
NOx mg/nm <sup>3</sup>	4659.7 mg/nm <sup>3</sup>	

<sup>1</sup> Ambient capability at 200 m (660 ft) above sea level. For ambient capability at other altitudes consult your Caterpillar dealer.

<sup>2</sup> Generator temperature rise is based on a 40° C (104° F) ambient per NEMA MG1-32.

<sup>3</sup> 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

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**Meets or Exceeds International Specifications:** AS1359, AS2789, CSA, EGSA101P, IEC60034, ISO3046, ISO8528, NEMA MG 1-32, UL508, 72/23/EEC, 89/336/EEC, 98/37/EEC

**Prime** - Output available with varying load for an unlimited time. Prime power in accordance with ISO8528. 10% overload power in accordance with ISO3046, AS2789, and BS5514 available on request. Prime power ambients shown indicate ambient at 100 percent load which results in a coolant top tank temperature just below the alarm temperature.

**Ratings** are based on SAE J1995 standard conditions. These ratings also apply at ISO3046 standard conditions.

**Fuel Rates** are based on fuel oil of 35° API (16° C or 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. Consult your Caterpillar representative for details.

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## DIMENSIONS

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Package Dimensions		
Length	4182.0 mm	164.65 in
Width	1107.4 mm	43.6 in
Height	2150.3 mm	84.66 in
Weight	3321 kg	7,322 lb

Note: Do not use for installation design.  
See general dimension drawings for detail (Drawing #2365745).

Performance No.: DM2268

Feature Code:: 406DEE8

Source:: European Sourced

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