STANDBY
440 ekW 550 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/EMISSIONS STRATEGY
• Low Fuel consumption

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•S™ 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
### FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

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<tr>
<th>System</th>
<th>Standard</th>
<th>Optional</th>
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<tbody>
<tr>
<td>Air Inlet</td>
<td>• Air cleaner</td>
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<tr>
<td>Cooling</td>
<td>• Package mounted radiator</td>
<td></td>
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<tr>
<td>Exhaust</td>
<td>• Exhaust flange outlet</td>
<td>[ ] Industrial [ ] Residential [ ] Critical Mufflers</td>
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<tr>
<td>Fuel</td>
<td>• Primary fuel filter with integral water separator</td>
<td>[ ] Oversize and premium generators</td>
</tr>
<tr>
<td></td>
<td>• Secondary fuel filters</td>
<td>[ ] Permanent magnet excitation (PMG)</td>
</tr>
<tr>
<td></td>
<td>• Fuel priming pump</td>
<td>[ ] Internal excited (IE)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[ ] Anti-condensation space heaters</td>
</tr>
<tr>
<td>Generator</td>
<td>• Matched to the performance and output characteristics of Cat engines</td>
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</tr>
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<td></td>
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<td>[ ] Internal excited (IE)</td>
</tr>
<tr>
<td></td>
<td>• IP23 protection</td>
<td>[ ] Anti-condensation space heaters</td>
</tr>
<tr>
<td>Power Termination</td>
<td>• Bus bar</td>
<td>[ ] Circuit breakers, UL listed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[ ] Circuit breakers, IEC compliant</td>
</tr>
<tr>
<td>Control Panel</td>
<td>• EMCP 4 Genset Controller</td>
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<td>[ ] EMCP 4.3</td>
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<td>[ ] Load share module</td>
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<td></td>
<td></td>
<td>[ ] Digital I/O module</td>
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<tr>
<td></td>
<td></td>
<td>[ ] Remote monitoring software</td>
</tr>
<tr>
<td>Mounting</td>
<td>• Rubber vibration isolators</td>
<td></td>
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<tr>
<td>Starting/Charging</td>
<td>• 24 volt starting motor</td>
<td>[ ] Battery chargers</td>
</tr>
<tr>
<td></td>
<td>• Batteries</td>
<td>[ ] Oversize batteries</td>
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<tr>
<td></td>
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<td>[ ] Jacket water heater</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[ ] Heavy duty starting system</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[ ] Charging alternator</td>
</tr>
<tr>
<td>General</td>
<td>• Paint - Caterpillar Yellow except rails and radiators gloss black</td>
<td>The following options are based on regional and product configuration:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[ ] Seismic Certification per Applicable Building Codes:</td>
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<tr>
<td></td>
<td></td>
<td>[ ] UL 2200 package</td>
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<tr>
<td></td>
<td></td>
<td>[ ] EU Certificate of Conformance (CE)</td>
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<tr>
<td></td>
<td></td>
<td>[ ] CSA Certification</td>
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<tr>
<td></td>
<td></td>
<td>[ ] EEC Declaration of Conformity</td>
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<tr>
<td></td>
<td></td>
<td>[ ] Narrow, wide or skid base</td>
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<tr>
<td></td>
<td></td>
<td>[ ] Sound attenuated, weather protective or high ambient weather</td>
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<tr>
<td></td>
<td></td>
<td>protective enclosures</td>
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<tr>
<td></td>
<td></td>
<td>[ ] Single or dual wall integral fuel tanks</td>
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<tr>
<td></td>
<td></td>
<td>[ ] Single or dual wall sub-base fuel tanks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[ ] Integral &amp; sub-base UL listed dual wall fuel tanks</td>
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<tr>
<td></td>
<td></td>
<td>[ ] Automatic transfer switches (ATS)</td>
</tr>
</tbody>
</table>
### CAT GENERATOR

Frame size................................................................. LC6114F
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
Over speed capability.......................................................... 150
Wave form Deviation (Line to Line)......................................... 2%
Voltage regulator................................................................. Single Phase Sensing
Voltage regulation.........Less than +/- 1/2% (steady state)
Less than +/- 5% (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 in\(^3\))
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
- Environment 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
## TECHNICAL DATA

### Open Generator Set - - 1500 rpm/50 Hz/400 Volts

<table>
<thead>
<tr>
<th>DM8495</th>
<th>Low BSFC</th>
</tr>
</thead>
<tbody>
<tr>
<td>550 kVA</td>
<td>440 ekW</td>
</tr>
</tbody>
</table>

### Generator Set Package Performance

- Genset Power rating @ 0.8 pf
- Genset Power rating with fan

### Fuel Consumption

- 100% load with fan: 111.8 L/hr, 29.5 Gal/hr
- 75% load with fan: 83.6 L/hr, 22.1 Gal/hr
- 50% load with fan: 58.7 L/hr, 15.5 Gal/hr

### Cooling System

- Air flow restriction (system): 0.12 kPa, 0.48 in. water
- Engine Coolant capacity with radiator/exp. tank: 47.8 L, 12.6 gal
- Radiator coolant capacity: 27.0 L, 7.1 gal

### Inlet Air

- Combustion air inlet flow rate: 30.7 m³/min, 1084.2 cfm

### Exhaust System

- Exhaust stack gas temperature: 528.4 °C, 983.1 °F
- Exhaust gas flow rate: 87.2 m³/min, 3079.4 cfm
- Exhaust flange size (internal diameter): 152.4 mm, 6.0 in
- Exhaust system backpressure (maximum allowable): 10.0 kPa, 40.2 in. water

### Heat Rejection

- Heat rejection to coolant (total): 166 kW, 9440 Btu/min
- Heat rejection to exhaust (total): 398 kW, 22634 Btu/min
- Heat rejection to atmosphere from engine: 70 kW, 3981 Btu/min
- Heat rejection to atmosphere from generator: 26.8 kW, 1512.7 Btu/min

### Alternator

- Motor starting capability @ 30% voltage dip: 1213 skVA, LC6114F
- Temperature Rise: 163 °C, 293 °F

### Emissions (Nominal)

- NOx mg/m³: 3689.4 mg/m³
- CO mg/m³: 168.2 mg/m³
- HC mg/m³: 5.8 mg/m³
- PM mg/m³: 7 mg/m³

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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.
RATING DEFINITIONS AND CONDITIONS


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.
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50 Hz 1500 rpm 400 Volts

DIMENSIONS

<table>
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<tr>
<th>Package Dimensions</th>
<th></th>
</tr>
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<tbody>
<tr>
<td>Length</td>
<td>3830.0 mm</td>
</tr>
<tr>
<td>Width</td>
<td>1130.6 mm</td>
</tr>
<tr>
<td>Height</td>
<td>2215.0 mm</td>
</tr>
</tbody>
</table>

NOTE: For reference only - do not use for installation design. Please contact your local dealer for exact weight and dimensions. (General Dimension Drawing #3930333).