



Image shown may not reflect actual package.

PRIME

**364 e kW 455 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 Emissions

DESIGN CRITERIA

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

FULL RANGE OF ATTACHMENTS

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

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® 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 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

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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"> • Canister Style Air Cleaners • Air Cleaner - single stage • Dual element • Heavy duty |
| Cooling | <ul style="list-style-type: none"> • Radiator package mounted(50°C) • Coolant drain line with valve terminated at edge of base • Fan and belt guards • Coolant level sight gauge • Caterpillar Extended Life Coolant | <ul style="list-style-type: none"> • Radiator removal • Radiator duct flange & guard |
| Exhaust | <ul style="list-style-type: none"> • Dry exhaust manifold • Flanged faced outlets • Stainless Steel Flex with split-cuff connection | <ul style="list-style-type: none"> • Mufflers • Manifold & Turbocharger guards • Elbows |
| Fuel | <ul style="list-style-type: none"> • Primary fuel filter with integral water separator • Secondary fuel filters • Fuel priming pump • Engine fuel transfer pump • Flex fuel lines • Fuel cooler* • Base, formed steel with integral 8 hour fuel tank *Not included with packages without radiators | <ul style="list-style-type: none"> • Integral single wall and dual wall fuel tank bases • Manual transfer pump • Fuel level switch |
| Generator | <ul style="list-style-type: none"> • Class H insulation • R448 voltage regulator with load adjustment module • IP23 Protection | <ul style="list-style-type: none"> • CDVR with KVAR/PF control • Oversize and premium generators • Bearing/Stator temperature detection (premium generator) • 3 phase sensing • Anti-condensation space heaters • Cable access box • Reactive droop |
| Power Termination | <ul style="list-style-type: none"> • Rear mounted circuit breaker, IEC 3 pole • Segregated low voltage wiring panel | <ul style="list-style-type: none"> • Circuit breakers, IEC compliant, 3 pole, 4 pole • Circuit breaker Shunt trip • Circuit breaker Auxillary contact • Floor standing IEC breakers |
| 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 (rear mounted) • Speed adjust • Emergency stop pushbutton • Voltage adjust | <ul style="list-style-type: none"> • EMCP 3.2 (can be RH mounted) • 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 • Gear type lube oil pump | <ul style="list-style-type: none"> • Manual sump pump |
| Mounting | <ul style="list-style-type: none"> • Linear vibration isolation-seismic zone 4 | <ul style="list-style-type: none"> • Formed steel wide base frame • Formed steel narrow base |
| Starting/Charging | <ul style="list-style-type: none"> • 24 volt starting motor • Battery with rack and cables | <ul style="list-style-type: none"> • Jacket water heater with shut off valves • Block heater • Ether starting aids • Battery disconnect switch • Battery chargers (5 & 10 amp) • Oversized batteries • 45 amp charging alternator |
| General | <ul style="list-style-type: none"> • Paint - Caterpillar yellow except rails and radiators gloss black • Flywheel and flywheel housing - SAE No.1 | |

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SPECIFICATIONS

CAT GENERATOR

Frame size..... LC6114D
Excitation..... Self Excitation
Pitch..... 0.6667
Number of poles..... 4
Number of bearings..... Single Bearing
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 with selectable volts/Hz
Voltage regulation..... Less than +/- 1/2% (steady state)
Less than +/- 1/2% (w/ 3% speed change)
Telephone influence factor..... Less than 50
Harmonic Distortion..... Less than 5%

CAT DIESEL ENGINE

C15 ATAAC, L-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..... ATAAC
Fuel System..... MEUI
Governor Type..... Caterpillar ADEM control system

CAT EMCP 3 CONTROL PANELS

- EMCP 3.1 (Standard)
- UL/CSA/CE
- NEMA 1, IP22 enclosure
- Run/Auto/Stop control
- True RMS metering, 3-phase
- Speed Adjust
- Vandal cover (option)
- Voltage adjust
- Digital Indication for:
 - RPM
 - Operating hours
 - Oil Pressure
 - Coolant temperature
 - System DC volts
 - L-L volts, L-N volts, phase amps, Hz
 - kW, kVA, kVAR, kW-hr, %kW, PF, (EMCP3.2/3.3)
- 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)
 - Under and over voltage
 - Under and over frequency
 - Reverse power
 - Overcurrent
- MODBUS isolated data link (RS-485 half-duplex EMCP 3.2)

TECHNICAL DATA

| Open Generator Set - - 1500 rpm/50 Hz/400 Volts | DM8488 | |
|--|--|---|
| Low Emissions | | |
| Generator Set Package Performance Genset Power rating @ 0.8 pf Genset Power rating with fan | 455 kVA 364 ekW | |
| Fuel Consumption 100% load with fan 75% load with fan 50% load with fan | 101.4 L/hr 75.4 L/hr 53.0 L/hr | 26.8 Gal/hr 19.9 Gal/hr 14.0 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 660 m ³ /min 57.8 L 20.8 L 37.0 L | 0.48 in. water 23308 cfm 15.3 gal 5.5 gal 9.8 gal |
| Inlet Air Combustion air inlet flow rate | 31.5 m ³ /min | 1112.4 cfm |
| Exhaust System Exhaust stack gas temperature Exhaust gas flow rate Exhaust flange size (internal diameter) Exhaust system backpressure (maximum allowable) | 496.4 ° C 85.7 m ³ /min 152.4 mm 6.8 kPa | 925.5 ° F 3026.5 cfm 6.0 in 27.3 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 | 138 kW 373 kW 74 kW 24.1 kW | 7848 Btu/min 21212 Btu/min 4208 Btu/min 1370.6 Btu/min |
| Alternator² Motor starting capability @ 30% voltage dip Frame Temperature Rise | 923 skVA LC6114D 125 ° C | 225 ° F |
| Emissions (Nominal)³ NOx mg/nm ³ CO mg/nm ³ HC mg/nm ³ PM mg/nm ³ | 1856.6 mg/nm ³ 174.3 mg/nm ³ 11.3 mg/nm ³ 9.5 mg/nm ³ | |

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, ISO3046, ISO8528, NEMA MG 1-33, UL508A, 98/37/EC

Prime - Output available with varying load for an unlimited time. Average power output is 70% of the prime power rating. Typical peak demand is 100% of prime rated ekW with 10% overload capability for emergency use for a maximum of 1 hour in 12. Overload operation cannot exceed 25 hours per year. Prime power in accordance with ISO3046. Prime ambients shown indicate ambient temperature at 100% 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 (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 | 3822.7 mm | 150.5 in |
| Width | 1110.0 mm | 43.7 in |
| Height | 2166.0 mm | 85.28 in |
| Weight | 4032 kg | 8,889 lb |

NOTE: For reference only - do not use for installation design. Please contact your local dealer for exact weight and dimensions. (General Dimension Drawing #2781056).

Performance No.: DM8488

Feature Code: C15DEM6

Gen. Arr. Number: 2351207

Source: China

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