

Caterpillar C18 635 kVa generator sound proof



FEATURES:

- Fitted in offshore skid with welding plates
- GW 8 000 kg



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PRIME 508 ekW 635 kVA
50 Hz 1500 rpm 400 Volts



SPECIFICATIONS

CAT GENERATOR

Frame size.....LC7024J
 Excitation.....Internal 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
 Overspeed capability.....150
 Wave form Deviation (Line to Line).....2%
 Voltage regulator.....Three phase sensing
 Voltage regulation.....Less than +/- 1/2% (steady state)
 Less than +/- ½% (w/ 3% speed change)

CAT DIESEL ENGINE

C18 ATAAC, I-6, 4-Stroke Water-cooled Diesel
 Bore.....145.00 mm (5.71 in)
 Stroke.....183.00 mm (7.2 in)
 Displacement.....18.13 L (1106.36 in³)
 Compression Ratio.....14.5:1
 Aspiration.....Air-to-Air Aftercooled
 Fuel System.....Electronic unit injection
 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
- Environmental 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 (kVA) (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



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TECHNICAL DATA

Open Generator Set - - 1500 rpm/50 Hz/400 Volts	DM9829	
Low Fuel Consumption		
Generator Set Package Performance Genset Power rating @ 0.8 pf Genset Power rating with fan	635 kVA 508 ekW	
Fuel Consumption 100% load with fan 75% load with fan 50% load with fan	130.5 L/hr 96.8 L/hr 67.0 L/hr	34.5 Gal/hr 25.6 Gal/hr 17.7 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 645 m ³ /min 81.8 L 20.8 L 61.0 L	0.48 in. water 22778 cfm 21.6 gal 5.5 gal 16.1 gal
Inlet Air Combustion air inlet flow rate	35.3 m ³ /min	1246.6 cfm
Exhaust System Exhaust stack gas temperature Exhaust gas flow rate Exhaust flange size (internal diameter) Exhaust system backpressure (maximum allowable)	550.5 °C 101.1 m ³ /min 203 mm 10.0 kPa	1022.9 °F 3570.3 cfm 8 in 40.2 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	165 kW 487 kW 91 kW 83 kW 33.0 kW	9384 Btu/min 27696 Btu/min 5175 Btu/min 4720 Btu/min 1876.7 Btu/min
Alternator² Motor starting capability @ 30% voltage dip Frame Temperature Rise	1681 skVA LC7024J 125 °C	225 °F
Lube System Sump refill with filter	38.0 L	10.0 gal
Emissions (Nominal)³ NOx mg/nm ³ CO mg/nm ³ HC mg/nm ³ PM mg/nm ³	3135.7 mg/nm ³ 411.9 mg/nm ³ 7.2 mg/nm ³ 14.2 mg/nm ³	

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.

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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

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.

Ratings are based on SAE J1349 standard conditions. These ratings also apply at ISO3046 standard conditions.

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