



Image shown may not reflect actual package.

PRIME

**800 e kW 1000 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

DESIGN CRITERIA

- The generator set accepts rated load in one step

FULL RANGE OF ATTACHMENTS

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

WORLDWIDE PRODUCT SUPPORT

- Worldwide parts availability through the Caterpillar dealer network
- With over 1844 dealer branch stores operating in 200 countries, you're never far from the Caterpillar part you need
- 99.7% of parts orders filled within 24 hours. The best product support record in the industry.
- Caterpillar dealers service technicians are trained to service every aspect of your electric power generation system
- Preventative maintenance agreements
- The Cat® SOS program effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by products

CAT C32 ATAAC DIESEL ENGINE

- Utilizes ACERT™ Technology
- Reliable, rugged, durable design
- Four-cycle diesel engine combines consistent performance and excellent fuel economy with minimum weight
- Electronic engine control

CAT SR4B GENERATOR

- Designed to match performance and output characteristics of Caterpillar diesel engines
- Optimum winding pitch for minimum total harmonic distortion and maximum efficiency
- Single point access to accessory connections
- UL 1446 recognized Class H insulation system
- Digital Voltage Regulator

CAT EMCP 3 SERIES CONTROL PANELS

- Controls designed to meet individual customer needs
- EMCP 3 provides the option for full-featured power metering and protective relaying

FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

System	Standard	Optional
Air Inlet	<ul style="list-style-type: none"> • Single element canister type air cleaner • Service indicator 	<ul style="list-style-type: none"> • Dual element air cleaners • Air inlet adapters
Cooling	<ul style="list-style-type: none"> • Radiator with guard (43°C) • Low profile (frontal area) • Low airflow • Coolant drain line with valve • Fan and belt guards • Caterpillar Extended Life Coolant • Coolant level sensors • Radiator duct flange 	<ul style="list-style-type: none"> • Radiator with 27°C ambient capability • Jacket water heater
Exhaust	<ul style="list-style-type: none"> • Dry exhaust manifold • Flanged faced outlets 	<ul style="list-style-type: none"> • Stainless steel exhaust flex fittings • Elbows, flanges, expanders & Y adapters
Fuel	<ul style="list-style-type: none"> • Primary fuel filter with water separator • Secondary fuel filter • Fuel priming pump • Flexible fuel lines • Fuel cooler 	
Generators	<ul style="list-style-type: none"> • Permanent magnet excited • Class H insulation • Class F temperature (105°C prime/130°C standby) • Winding temperature detectors (select models) • Anti-condensation space heaters 	<ul style="list-style-type: none"> • Oversize & premium generators
Power Termination	<ul style="list-style-type: none"> • Bus bar (NEMA and IEC mechanical lug holes) -right side standard • Bottom cable entry 	<ul style="list-style-type: none"> • Circuit breakers, UL listed, 3 pole with shunt trip, 80% or 100% rated, choice of trip units, manual or electrically operated (low voltage only) • Circuit breakers, IEC compliant, 3 or 4 pole with shunt trip (low voltage only), choice of trip units, manual or electrically operated • Shroud cover for bottom cable entry • Power terminations can be located on the left and/or rear as an option. Also, multiple circuit breakers can be ordered (up to 3) • Top cable entry
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"> • User Interface panel (UIP) - rear mount • EMCP 3.1 generator set controller • Speed adjust • AC & DC customer wiring area (right side) • CAT Digital Voltage Regulator (CDVR) with KVAR/PF control, 3-phase sensing • Emergency Stop Push button 	<ul style="list-style-type: none"> • EMCP 3.2 and EMCP 3.3 • Option for right or left mount UIP • Option for rear or left mount Customer wiring area • Local & remote annunciator modules • Discrete I/O Module • Generator temperature monitoring & protection • Voltage raise/lower switch
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"> • Deep sump oil pan
Mounting	<ul style="list-style-type: none"> • Formed steel welded base • Anti-vibration mounts (shipped loose) 	
Starting/Charging	<ul style="list-style-type: none"> • 24 volt starting motor(s) • Batteries with rack and cables • Battery disconnect 	<ul style="list-style-type: none"> • Battery chargers (10 Amp) • 45 amp charging alternator • Oversize batteries • Ether starting aid
General	<ul style="list-style-type: none"> • Right-hand service • Paint - Caterpillar Yellow (except rails and radiators gloss black) • SAE standard rotation • Flywheel and Flywheel housing - SAE No. 0 	<ul style="list-style-type: none"> • UL 2200 • CSA certification • EU Declaration of Incorporation • EEC Declaration of Conformity

PRIME 800 kW 1000 kVA

50 Hz 1500 rpm 400 Volts



SPECIFICATIONS

CAT GENERATOR

SR4B Generator
Frame size..... 693
Excitation..... Permanent Magnet
Pitch..... 0.7222
Number of poles..... 4
Number of bearings..... 002
Insulation..... UL 1446 Recognized Class H with tropicalization and antiabrasion
IP rating..... Drip Proof IP22
Alignment..... Close Coupled
Overspeed capability - % of rated..... 180
Wave form..... 003.00
Voltage regulator. 3 Phase sensing with selectable 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

C32 TA, V-12, 4-stroke watercooled diesel
Bore - mm..... 145.00 mm (5.71 in)
Stroke - mm..... 162.00 mm (6.38 in)
Displacement - L..... 32.10 L (1958.86 in³)
Compression ratio..... 15:1
Aspiration..... TA
Fuel system..... MEUI
Governor type..... ADEM™ A4

CAT EMCP 3 SERIES CONTROLS

- EMCP 3.1 (Standard)
 - Integral to generator terminal box
 - Single location for customer connection
 - IP 23 enclosure
 - 24 Volt DC Control
 - UL/CSA
 - Lockable hinged door (option)
 - Run/Auto/Stop control
 - True RMS metering, 3-phase
 - Speed Adjust
 - Voltage adjust (optional on 3.1)
 - Digital indications for:
 - RPM
 - Operating hours
 - Oil pressure
 - Coolant temperature
 - System DC volts
 - L-L volts, L-N volts, phase amps, Hz
 - ekW, kVA, kVAR, kW-hr, %kW, PF(*)
 - Shutdowns with indicating lights (with optional annunciator):
 - Low oil pressure
 - High coolant temperature
 - Overspeed
 - Emergency stop
 - Failure to start (overcrank)
 - Programmable protective relaying functions (*):
 - Under and over voltage
 - Under and over frequency
 - Reverse power
 - Overcurrent
 - MODBUS isolated data link (RS-485 half-duplex) supports serial communication at data rate up to 115.2 kbaud (*)
- (*) Available on EMCP 3.2 & EMCP 3.3

TECHNICAL DATA

Open Generator Set - - 1500 rpm/50 Hz/400 Volts	DM9048	
Low Fuel Consumption		
Generator Set Package Performance Genset Power rating @ 0.8 pf Genset Power rating with fan	1000 kVA 800 kW	
Coolant to aftercooler Coolant to aftercooler temp max	49 ° C	120 ° F
Fuel Consumption 100% load with fan 75% load with fan 50% load with fan	210.5 L/hr 163.2 L/hr 117.0 L/hr	55.6 Gal/hr 43.1 Gal/hr 30.9 Gal/hr
Cooling System¹ Ambient air temperature 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	54 ° C 0.12 kPa 1217 m ³ /min 190.0 L 55.0 L 135.0 L	129 ° F 0.48 in. water 42978 cfm 50.2 gal 14.5 gal 35.7 gal
Inlet Air Combustion air inlet flow rate	58.1 m ³ /min	2051.8 cfm
Exhaust System Exhaust stack gas temperature Exhaust gas flow rate Exhaust flange size (internal diameter) Exhaust system backpressure (maximum allowable)	519.1 ° C 163.0 m ³ /min 203 mm 10.0 kPa	966.4 ° F 5756.3 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	317 kW 856 kW 134 kW 49 kW 42.1 kW	18028 Btu/min 48681 Btu/min 7621 Btu/min 2787 Btu/min 2394.2 Btu/min
Alternator² Motor starting capability @ 30% voltage dip Frame Temperature Rise	1982 skVA 693 105 ° C	221 ° F
Lube System Sump refill with filter	68.0 L	18.0 gal
Emissions (Nominal)³ NOx g/hp-hr CO g/hp-hr HC g/hp-hr PM g/hp-hr	6.24 g/hp-hr .57 g/hp-hr .02 g/hp-hr .017 g/hp-hr	

¹ Ambient capability at 300m (984 ft) above sea level. For ambient capability at other altitudes, consult your Caterpillar dealer.
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 40°C 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.

PRIME 800 kW 1000 kVA

50 Hz 1500 rpm 400 Volts



RATING DEFINITIONS AND CONDITIONS

Meets or Exceeds International Specifications: AS1359, BS4999, EGSA101P, ISO3046, ISO8528, NEMA MG 1-32, 89/336/EEC, 98/37/EEC, 72/23/EEC, CSA, UL 508 and IEC 60034

Standby - Output available with varying load for the duration of the interruption of the normal source power. Standby power in accordance with ISO8528. Fuel stop power in accordance with ISO3046/1, AS2789, DIN6271, and BS5514. Standby ambients shown indicate ambient temperature at 100 percent load which results in a coolant top tank temperature just below the shutdown temperature.

Ratings are based on SAE J1995 standard conditions. These ratings also apply at ISO3046/1, DIN6271, and BS5514 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.

DIMENSIONS

Package Dimensions		
Length	4766.9 mm	187.67 in
Width	2024.3 mm	79.7 in
Height	2254.0 mm	88.74 in
Weight	8256 kg	18,201 lb

Note: Do not use for installation design.
See general dimension drawings for detail (Drawing #2763027).

Performance No.: DM9048

Feature Code:: C32DE03

Source:: U.S. Sourced

www.CAT-ElectricPower.com

© 2006 Caterpillar
All rights reserved.

Materials and specifications are subject to change without notice.
The International System of Units (SI) is used in this publication.

CAT, CATERPILLAR, their respective logos and "Caterpillar Yellow," as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.