



Image shown may not reflect actual package.

STANDBY

**750 kW 938 kVA
60 Hz 1800 rpm 480 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

- EPA Tier 2

DESIGN CRITERIA

- The generator set accepts 100% rated load in one step per NFPA 110 and meets ISO 8528-5 transient response.

UL 2200

- UL 2200 listed packages available. Certain restrictions may apply. Consult with your Caterpillar Dealer.

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

- 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 C27 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 GENERATOR

- Designed to match the performance and output characteristics of Caterpillar diesel engines
- Single point access to accessory connections
- 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">• 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 (50°C)• Low profile (frontal area)• Low airflow• Coolant drain line with valve• Fan and belt guards• Caterpillar Extended Life Coolant• Coolant level sensors• ATAAC• Duct Flange	<ul style="list-style-type: none">• Jacket water heater with shutoff valves
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 (terminated on base)• Fuel pressure gauge	
Generators	<ul style="list-style-type: none">• Class H insulation• Class F temperature (105°C prime/130°C standby)• Winding temperature detectors (select models)• Anti-condensation space heaters• Power Terminal Strip	<ul style="list-style-type: none">• Oversize & premium generators
Power Termination	<ul style="list-style-type: none">• Bus bar (NEMA hole connections)a• Bottom cable entry• AC & DC customer wiring area	<ul style="list-style-type: none">• Circuit breakers, UL listed, 3 pole with shunt trip, 80% rated
Governor	<ul style="list-style-type: none">• ADEM™ A4	
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	
Mounting	<ul style="list-style-type: none">• Structural steel tube• Anti-vibration mounts	
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

SPECIFICATIONS

CAT GENERATOR

SR4B Generator	
Frame size.....	596
Excitation.....	Self Excited
Pitch.....	0.8667
Number of poles.....	4
Number of bearings.....	Single Bearing
Number of Leads.....	12
Insulation.....	UL 1446 Recognized Class H with tropicalization and antiabrasion
IP rating.....	Drip Proof IP22
Alignment.....	Close Coupled
Overspeed capability - % of rated.....	150
Wave form.....	Less than 5% deviation
Paralleling kit/Droop transformer.....	Standard
Voltage regulator.3 Phase sensing with selectible 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

C27 TA, V-12, 4-stroke-cycle watercooled diesel	
Bore - mm.....	137.20 mm (5.4 in)
Stroke - mm.....	152.40 mm (6.0 in)
Displacement - L.....	27.03 L (1649.47 in ³)
Compression ratio.....	16.5:1
Aspiration.....	TA
Fuel system.....	MEUI
Governor type.....	ADEM™ A4

CAT EMCP 3 SERIES CONTROLS

- EMCP 3.1 (Standard)
- EMCP 3.2 / EMCP 3.3 (Option)
- Single location customer connector point
- True RMS metering, 3-phase
- Controls
 - Run / Auto / Stop control
 - Speed Adjust
 - Voltage Adjust
 - Emergency Stop Pushbutton
 - Engine cycle crank
- Digital Indication 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 (EMCP 3.2 / 3.3)
- Shutdowns with 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 & 3.3)
 - Under and over voltage
 - Under and over frequency
 - Overcurrent (time and inverse time)
 - Reverse power (EMCP 3.3)
- MODBUS isolated data link RS-485 half-duplex (EMCP 3.2 & 3.3)
- Options
 - Vandal door
 - Local annunciator module
 - Remote annunciator module
 - Input / Output module
 - RTD / Thermocouple Modules
 - Monitoring software

TECHNICAL DATA

Open Generator Set - - 1800 rpm/60 Hz/480 Volts	DM9071	
EPA Certified Tier 2		
Generator Set Package Performance Genset Power rating @ 0.8 pf Genset Power rating with fan	937.5 kVA 750 ekW	
Coolant to aftercooler temp max Coolant to aftercooler temp max	49 ° C	120 ° F
Fuel Consumption 100% load with fan 75% load with fan 50% load with fan	202.6 L/hr 162.2 L/hr 115.9 L/hr	53.5 Gal/hr 42.8 Gal/hr 30.6 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 1136 m³/min 160.0 L 55.0 L 105.0 L	0.48 in. water 40117 cfm 42.3 gal 14.5 gal 27.7 gal
Inlet Air Combustion air inlet flow rate	57.6 m³/min	2034.1 cfm
Exhaust System Exhaust stack gas temperature Exhaust gas flow rate Exhaust flange size (internal diameter) Exhaust system backpressure (maximum allowable)	509.9 ° C 159.9 m³/min 203 mm 10.0 kPa	949.8 ° F 5646.8 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	326 kW 715 kW 134 kW 147 kW 34.5 kW	18540 Btu/min 40662 Btu/min 7621 Btu/min 8360 Btu/min 1962.0 Btu/min
Alternator² Motor starting capability @ 30% voltage dip Frame Temperature Rise	2034 skVA 596 130 ° C	234 ° 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	5.32 g/hp-hr .24 g/hp-hr .03 g/hp-hr .022 g/hp-hr	

¹ For ambient and altitude capabilities consult your Caterpillar dealer. Air flow restriction (system) is added to existing restriction from factory.

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.

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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

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. Standby power in accordance with ISO8528. Fuel stop power in accordance with ISO3046. Standby ambients shown indicate ambient temperature at 100% load which results in a coolant top tank temperature just below the shutdown temperature.

Ratings are based on SAE J1349 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	4668.7 mm	183.81 in
Width	1904.6 mm	74.98 in
Height	2080.5 mm	81.91 in
Weight	6332 kg	13,960 lb

NOTE: For reference only - do not use for installation design. Please contact your local dealer for exact weight and dimensions. (General Dimension Drawing #3071564).

Performance No.: DM9071

Feature Code: C27DE32

Gen. Arr. Number: 1366597

Source: U.S. Sourced

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