



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 Cat® 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

- Cat dealers provide extensive post sale support including maintenance and repair agreements
- Cat dealers have over 1,600 dealer branch stores operating in 200 countries
- The Cat® S•O•S<sup>SM</sup> 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 Cat 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"> <li>• Single element canister type air cleaner</li> <li>• Service indicator</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Dual element air cleaners</li> <li><input type="checkbox"/> Air inlet adapters</li> </ul>
Cooling	<ul style="list-style-type: none"> <li>• Radiator with guard (50°C)</li> <li>• Low profile (frontal area)</li> <li>• Low airflow</li> <li>• Coolant drain line with valve</li> <li>• Fan and belt guards</li> <li>• Caterpillar Extended Life Coolant</li> <li>• Coolant level sensors</li> <li>• ATAAC</li> <li>• Duct Flange</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Jacket water heater with shutoff valves</li> </ul>
Exhaust	<ul style="list-style-type: none"> <li>• Dry exhaust manifold</li> <li>• Flanged faced outlets</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Stainless steel exhaust flex fittings</li> <li><input type="checkbox"/> Elbows, flanges, expanders &amp; Y adapters</li> </ul>
Fuel	<ul style="list-style-type: none"> <li>• Primary fuel filter with water separator</li> <li>• Secondary fuel filter</li> <li>• Fuel priming pump</li> <li>• Flexible fuel lines (terminated on base)</li> <li>• Fuel pressure gauge</li> </ul>	
Generator	<ul style="list-style-type: none"> <li>• Class H insulation</li> <li>• Class F temperature</li> <li>• Power terminal strip</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Oversize &amp; premium generators</li> <li><input type="checkbox"/> Winding temperature detectors (select models)</li> <li><input type="checkbox"/> Anti-condensation space heaters</li> </ul>
Power Termination	<ul style="list-style-type: none"> <li>• Bus bar (NEMA hole connections)</li> <li>• Bottom cable entry</li> <li>• AC &amp; DC customer wiring area</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Circuit breakers, UL listed, 3 pole with shunt trip, 80% and 100% rated</li> </ul>
Governor	<ul style="list-style-type: none"> <li>• ADEM™ A4</li> </ul>	
Control Panel	<ul style="list-style-type: none"> <li>• User Interface panel (UIP) - rear mount</li> <li>• EMCP 3.1 generator set controller</li> <li>• AC &amp; DC customer wiring area (right side)</li> <li>• CAT Digital Voltage Regulator (CDVR) with KVAR/PF control, 3-phase sensing</li> <li>• Emergency Stop Push button</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> EMCP 3.2 and EMCP 3.3</li> <li><input type="checkbox"/> Option for right or left mount UIP</li> <li><input type="checkbox"/> Option for rear or left mount Customer wiring area</li> <li><input type="checkbox"/> Local &amp; remote annunciator modules</li> <li><input type="checkbox"/> Discrete I/O Module</li> <li><input type="checkbox"/> Generator temperature monitoring &amp; protection</li> </ul>
Lube	<ul style="list-style-type: none"> <li>• Lubricating oil and filter</li> <li>• Oil drain line with valves</li> <li>• Fumes disposal</li> <li>• Gear type lube oil pump</li> </ul>	
Mounting	<ul style="list-style-type: none"> <li>• Structural steel tube</li> <li>• Anti-vibration mounts</li> </ul>	
Starting/Charging	<ul style="list-style-type: none"> <li>• 24 volt starting motor(s)</li> <li>• Batteries with rack and cables</li> <li>• Battery disconnect</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Battery chargers (10 amp)</li> <li><input type="checkbox"/> 45 amp charging alternator</li> <li><input type="checkbox"/> Oversize batteries</li> <li><input type="checkbox"/> Ether starting aid</li> </ul>
General	<ul style="list-style-type: none"> <li>• Right-hand service</li> <li>• Paint - Caterpillar Yellow (except rails and radiators gloss black)</li> <li>• SAE standard rotation</li> <li>• Flywheel and Flywheel housing - SAE No. 0</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> UL 2200</li> <li><input type="checkbox"/> CSA certification</li> </ul>

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## 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 <sup>3</sup> )
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

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## TECHNICAL DATA

Open Generator Set - - 1800 rpm/60 Hz/480 Volts	DM9071	
<b>EPA Certified Tier 2</b>		
<b>Generator Set Package Performance</b> Genset Power rating @ 0.8 pf Genset Power rating with fan	937.5 kVA 750 ekW	
<b>Coolant to aftercooler temp max</b> Coolant to aftercooler temp max	49 ° C	120 ° F
<b>Fuel Consumption</b> 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
<b>Cooling System<sup>1</sup></b> 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 m <sup>3</sup> /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
<b>Inlet Air</b> Combustion air inlet flow rate	57.6 m <sup>3</sup> /min	2034.1 cfm
<b>Exhaust System</b> Exhaust stack gas temperature Exhaust gas flow rate Exhaust flange size (internal diameter) Exhaust system backpressure (maximum allowable)	509.9 ° C 159.9 m <sup>3</sup> /min 203 mm 10.0 kPa	949.8 ° F 5646.8 cfm 8 in 40.2 in. water
<b>Heat Rejection</b> 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
<b>Alternator<sup>2</sup></b> Motor starting capability @ 30% voltage dip Frame Temperature Rise	2034 skVA 596 130 ° C	234 ° F
<b>Lube System</b> Sump refill with filter	68.0 L	18.0 gal
<b>Emissions (Nominal)<sup>3</sup></b> 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	

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

<sup>2</sup> 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.

<sup>3</sup> 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

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**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

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Package Dimensions		
Length	4668.7 mm	183.81 in
Width	1904.6 mm	74.98 in
Height	2080.5 mm	81.91 in
Weight	6175 kg	13,614 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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