



Image shown may not reflect actual package.

## STANDBY

**880 kW 1100 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.

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## FEATURES

### FUEL/EMISSIONS STRATEGY

- Low fuel consumption

### 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
- 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 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 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</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>• Radiator duct flange</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Radiator with 27°C ambient capability</li> <li><input type="checkbox"/> Jacket water heater</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</li> <li>• Fuel cooler</li> </ul>	
SR5 Generator	<ul style="list-style-type: none"> <li>• Class H insulation</li> <li>• Class H temperature</li> <li>• Winding temperature detectors (select models)</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Oversize &amp; premium generators</li> <li><input type="checkbox"/> Anti-condensation space heaters</li> </ul>
Power Termination	<ul style="list-style-type: none"> <li>• Bus bar (NEMA or IEC mechanical lug holes)</li> <li>• Top cable entry</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Circuit breakers, UL listed, 3 pole with shunt trip, 100% rated, choice of trip units, manual or electrically operated (low voltage only)</li> <li><input type="checkbox"/> Circuit breakers, IEC compliant, 3 or 4 pole with shunt trip (low voltage only), choice of trip units, manual or electrically operated</li> <li><input type="checkbox"/> Bottom cable entry</li> <li><input type="checkbox"/> Power terminations can be located on the right, left and/or rear as an option. Also, multiple circuit breakers can be ordered (up to 2)</li> </ul>
Governor	<ul style="list-style-type: none"> <li>• ADEM™ A4</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Load Share Module</li> </ul>
Control Panels	<ul style="list-style-type: none"> <li>• EMCP 3.1</li> <li>• User Interface panel (UIP) - rear mount</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"/> Right or left mount UIP</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> <li><input type="checkbox"/> Load share module</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>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Deep sump oil pan</li> </ul>
Mounting	<ul style="list-style-type: none"> <li>• Formed steel welded base</li> <li>• Anti-vibration mounts (shipped loose)</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 that are 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> <li><input type="checkbox"/> EU Declaration of Incorporation</li> <li><input type="checkbox"/> EEC Declaration of Conformity</li> </ul>

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## SPECIFICATIONS

### CAT GENERATOR

SR5 Generator

Frame size.....	1402
Excitation.....	IE
Pitch.....	0.6667
Number of poles.....	4
Number of bearings.....	2
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.....	.002.00
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 in <sup>3</sup> )
Compression ratio.....	15.0:1
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 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 & 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 - - 1500 rpm/50 Hz/400 Volts	DM9951	
<b>Low Fuel Consumption</b>		
<b>Generator Set Package Performance</b> Genset Power rating @ 0.8 pf Genset Power rating with fan	1100 kVA 880 ekW	
<b>Coolant to aftercooler</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	226.4 L/hr 170.3 L/hr 117.4 L/hr	59.8 Gal/hr 45.0 Gal/hr 31.0 Gal/hr
<b>Cooling System<sup>1</sup></b> Air flow restriction (system) Engine coolant capacity	0.12 kPa 55.0 L	0.48 in. water 14.5 gal
<b>Inlet Air</b> Combustion air inlet flow rate	66.0 m <sup>3</sup> /min	2330.8 cfm
<b>Exhaust System</b> Exhaust stack gas temperature Exhaust gas flow rate Exhaust flange size (internal diameter) Exhaust system backpressure (maximum allowable)	508.7 ° C 180.1 m <sup>3</sup> /min 203 mm 10.0 kPa	947.7 ° F 6360.2 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	319 kW 818 kW 181 kW 120 kW 57.2 kW	18141 Btu/min 46520 Btu/min 10293 Btu/min 6824 Btu/min 3253.0 Btu/min
<b>Alternator<sup>2</sup></b> Motor starting capability @ 30% voltage dip Frame Temperature Rise	2297 skVA 1402 150 ° C	270 ° F
<b>Lube System</b> Sump refill with filter	68.0 L	18.0 gal
<b>Emissions (Nominal)<sup>3</sup></b> NOx mg/nm <sup>3</sup> CO mg/nm <sup>3</sup> HC mg/nm <sup>3</sup> PM mg/nm <sup>3</sup>	2966.9 mg/nm <sup>3</sup> 308.9 mg/nm <sup>3</sup> 4.0 mg/nm <sup>3</sup> 14.1 mg/nm <sup>3</sup>	

<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	4562.1 mm	179.61 in
Width	1854.4 mm	73.01 in
Height	2240.7 mm	88.22 in
Weight	7395 kg	16,303 lb

NOTE: For reference only - do not use for installation design. Please contact your local dealer for exact weight and dimensions. (General Dimension Drawing #3497403).

Performance No.: DM9951

Feature Code: C32DE24

Gen. Arr. Number: 3002236

Source: U.S. Sourced

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