



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 per NFPA 110 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 1,800 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 4 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>	<input type="checkbox"/> Dual element air cleaners <input type="checkbox"/> Air inlet adapters
Cooling	<ul style="list-style-type: none"> <li>• Radiator with guard</li> <li>• Coolant drain line with valve</li> <li>• Fan and belt guards</li> <li>• Cat Extended Life Coolant</li> <li>• Coolant level sensors</li> <li>• Radiator duct flange</li> </ul>	<input type="checkbox"/> Jacket water heater
Exhaust	<ul style="list-style-type: none"> <li>• Dry exhaust manifold</li> <li>• Flanged faced outlets</li> </ul>	<input type="checkbox"/> Stainless steel exhaust flex fittings <input type="checkbox"/> Elbows, flanges, expanders & Y adapters
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>• Cat digital voltage regulator (CDVR) with kVAR/PF control, 3-phase sensing</li> <li>• Reactive droop</li> </ul>	<input type="checkbox"/> Oversize & premium generators <input type="checkbox"/> Winding temperature detectors <input type="checkbox"/> Anti-condensation heaters <input type="checkbox"/> Bearing temperature detectors
Power Termination	<ul style="list-style-type: none"> <li>• Bus bar (NEMA or IEC mechanical lug holes)</li> <li>• Top cable entry</li> </ul>	<input type="checkbox"/> Circuit breakers, UL listed, 3 pole with shunt trip, 100% rated, manual or electrically operated <input type="checkbox"/> Circuit breakers, IEC compliant, 3 or 4 pole with shunt trip, manual or electrically operated <input type="checkbox"/> Bottom cable entry <input type="checkbox"/> Power terminations can be located on the right, left and/or rear as an option. Multiple circuit breaker options
Governor	<ul style="list-style-type: none"> <li>• ADEM™ A4</li> </ul>	<input type="checkbox"/> Load Share Module
Control Panels	<ul style="list-style-type: none"> <li>• EMCP 4.2</li> <li>• User Interface panel (UIP) - rear mount</li> <li>• AC &amp; DC customer wiring area (right side)</li> <li>• Emergency stop pushbutton</li> </ul>	<input type="checkbox"/> EMCP 4.3 ... <input type="checkbox"/> EMCP 4.4 <input type="checkbox"/> Option for right or left mount UIP <input type="checkbox"/> Local & remote annunciator modules <input type="checkbox"/> Digital I/O Module <input type="checkbox"/> Generator temperature monitoring & protection <input type="checkbox"/> Remote monitoring software
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>• Rails - engine / generator / radiator mounting</li> <li>• Rubber anti-vibration mounts (shipped loose)</li> </ul>	<input type="checkbox"/> Spring-type vibration isolator <input type="checkbox"/> IBC Isolator
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>	<input type="checkbox"/> Battery chargers (10 amp) <input type="checkbox"/> 45 amp charging alternator <input type="checkbox"/> Oversize batteries <input type="checkbox"/> Ether starting aid
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>	<input type="checkbox"/> CSA certification <input type="checkbox"/> EU Declaration of Incorporation <input type="checkbox"/> EEC Declaration of Conformity <input type="checkbox"/> Seismic Certification per Applicable Building Codes: IBC 2000, IBC 2003, IBC 2006, IBC 2009, CBC 2007

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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
Number of Leads.....	006
Insulation.....	UL 1446 Recognized Class H with tropicalization and antiabrasion
IP rating.....	IP23
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 4 SERIES CONTROL PANELS

EMCP 4 controls including:

- Run / Auto / Stop Control
- Speed Adjust
- Voltage Adjust
- Engine Cycle Crank
- Emergency stop pushbutton

EMCP 4.2 controller features:

- 24-volt DC operation
- Environmental sealed front face
- Text alarm/event descriptions
- True RMS AC metering, 3-phase, ±1% accuracy.

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)
- Power Factor (per phase & average)
- kW (per phase, average & percent)
- kVA (per phase, average & percent)
- kVAR (per phase, average & percent)
- kW-hr (total)
- kVAR-hr (total)

Warning/shutdown with common LED indication of shutdowns for:

- 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)
- Reverse Reactive Power (kVAR) (32RV)
- Overcurrent (50/51)

Communications

- Customer data link (Modbus RTU)
- Accessory module data link
- Serial annunciator module data link
- 6 programmable digital inputs
- 4 programmable relay outputs (Form A)
- 2 programmable relay outputs (Form C)
- 2 programmable digital outputs

Compatible with the following optional modules:

- Digital I/O module
- Local Annunciator
- Remote CAN annunciator
- Remote serial annunciator
- RTD module
- Thermocouple module

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## 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	99.0 L	26.2 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 Cat 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 Cat representative for details. For information regarding Low Sulfur fuel and Biodiesel capability, please consult your Cat dealer.

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## DIMENSIONS

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Package Dimensions		
Length	4474.2 mm	176.15 in
Width	2010.4 mm	79.15 in
Height	2173.7 mm	85.58 in
Weight	6910 kg	15,234 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: C32DE32

Gen. Arr. Number: 3002236

Source: U.S. Sourced

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