



Image shown may not reflect actual package

STANDBY 880 ekW 1100 kVA 50 Hz 1500 rpm 400 Volts

Caterpillar® is leading the power generation market place 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 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

- Caterpillar® dealers provide extensive post sale support including maintenance and repair agreements
- Caterpillar dealers have over 1600 dealer branch stores operating in 200 countries.
- The Cat® SOSSM 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-stroke diesel engine combines consistent performance and excellent fuel economy with minimum weight
- Electronic engine control

CAT GENERATOR

- Matched to the performance and output characteristics of Caterpillar engines
- Single point access to accessory connections
- UL 1446 Recognized Class H insulation

CAT EMCP3 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 with 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 	
Exhaust	<ul style="list-style-type: none"> • Dry exhaust manifold • Flanged faced outlets 	<ul style="list-style-type: none"> • Mufflers • 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 	
Generator	<ul style="list-style-type: none"> • 3 Phase brushless, Salient pole • Class H insulation • CAT digital voltage regulator (CDVR) with VAR/PF control, 3-phase sensing • Bus bar connections • Winding temperature detectors 	<ul style="list-style-type: none"> • Oversize & premium generators • Anti-condensation space heaters
Power Termination	<ul style="list-style-type: none"> • Bus bar (NEMA and IEC mechanical lug holes) • Top cable entry 	<ul style="list-style-type: none"> • Circuit breakers, UL listed, 3 pole shunt trip, 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 • Right, left, and/or rear cable access with top or bottom cable entry
Governor	<ul style="list-style-type: none"> • ADEM™ A4 	<ul style="list-style-type: none"> • Load share module
Control Panel	<ul style="list-style-type: none"> • EMCP 3.1 • User Interface panel (UIP) - rear mount • Emergency Stop Push button 	<ul style="list-style-type: none"> • EMCP 3.2 and EMCP 3.3 • Right or left mount UIP • Local & remote annunciator modules • Discrete I/O Module • Generator temperature monitoring & protection
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"> • Rails - engine / generator / radiator mounting • Anti-vibration mounts (shipped loose) 	<ul style="list-style-type: none"> • Isolator removal • Spring type vibration isolator
Starting / Charging	<ul style="list-style-type: none"> • 24 volt starting motor(s) • Batteries with rack and cables • Battery disconnect switch 	<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 that are 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

SPECIFICATIONS

CAT GENERATOR

Frame	1402
Excitation	Internal Excitation (IE)
Pitch.....	0.6667
Number of poles.....	4
Number of bearings	Two Bearing
Insulation	Class H
IP rating	Drip proof IP23
Over speed capability - % of rated.....	125%
Wave form deviation.....	3 %
Voltage regulator.....	3 phase sensing with load adjustable module
Telephone Influence Factor	Less than 50
Harmonic Distortion	Less than 5%

CAT DIESEL ENGINE

C32 ATAAC, V-12, 4 stroke water-cooled diesel

Bore	145.00 mm (5.71 in)
Stroke	162.00 mm (6.38 in)
Displacement	32.10 L (1958.86 in ³)
Compression ratio.....	15:1
Aspiration.....	TA
Fuel system.....	MEUI
Governor Type.....	ADEM™ A4

CAT EMCP 3 CONTROL PANELS

- 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	Standby DM9951	
Package Performance		
Power rating	880 ekW	
Power rating @ 0.8 pf	1100 kVA	
Fuel Consumption		
100% load with fan	226.4 L/hr	59.8 Gal/hr
75% load with fan	117.3 L/hr	45.0 Gal/hr
50% load with fan	117.4 L/hr	31.0 Gal/hr
Cooling System*		
Ambient air temperature	45 °C	113 °F
Air flow (max @rated speed)	1039 m ³ /min	36692 cfm
Engine coolant Capacity with radiator arrangement)	190.0 L	50.2 US Gal
Engine coolant capacity	55.0 L	14.5 US Gal
Radiator coolant capacity	135.0 L	35.7 US Gal
Inlet Air		
Combustion air inlet flow rate	66.0 m ³ /min	2330.8 cfm
Exhaust System		
Exhaust stack gas temperature	508.7 °C	947.7 °F
Exhaust gas flow rate	180.1 m ³ /min	6360.2 cfm
Exhaust flange size (internal diameter)	203 mm	8 in
Exhaust system backpressure (maximum allowable)	10.0 kPa	40.2 in. water
Heat Rejection		
Heat rejection to coolant (total)	319 kW	18141 Btu/min
Heat rejection to exhaust (total)	818 kW	46520 Btu/min
Heat rejection to aftercooler	181 kW	10293 Btu/min
Heat rejection to atmosphere from engine	120 kW	6824 Btu/min
Heat rejection to atmosphere from generator	57.2 kW	3256 Btu/min
Alternator**		
Motor starting capability @ 30% voltage dip	2297 SKVA	
Frame	1402	
Temperature Rise	150°C	302 °F
Lube System		
Lube oil refill volume with filter change for standard sump	68.0 L	18.0 US Gal
Emissions (Nominal)***		
NO _x mg/nm ³	2966.9 mg/nm ³	
CO mg/nm ³	308.9 mg/nm ³	
HC mg/nm ³	4.0 mg/nm ³	
PM mg/nm ³	14.1 mg/nm ³	

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

** 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 degree C ambient per NEMA MG1-32.

*** 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, NO_x. 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.

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	4666.9 mm	183.7 in
Width	1829.0 mm	72.0 in
Height	2212.6 mm	87.1 in
Weight	8028 kg	17,699 lb

NOTE: For reference only - do not use for installation design. Please contact your local dealer for exact weight and dimensions.

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Performance No.: DM9951

Feature Code: C32DE24

Gen. Arr. Number: 3002236

Sourced: U.S. Sourced

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

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