3512C Generator Set

Electric Power

Caterpillar is leading the power generation marketplace with Power Solutions engineered to deliver unmatched flexibility, expandability, reliability, and cost-effectiveness.

Specifications

Generator Set Specifications	
Minimum Rating	1230 ekW
Maximum Rating	1500 ekW
Voltage	220 to 13800 Volts
Frequency	60 Hz
Speed	1800 RPM

Generator Set Configurations	
Emissions/Fuel Strategy	J.S. EPA Certified for Stationary Emergency Use Only (Tier 2 Nonroad Equivalent Emission Standards)

Engine Specifications		
Engine Model	3512C ATAAC, V-12, 4-Stroke Water-Cooled Diesel	
Bore	170 mm	6.69 in
Displacement	51.8 L	3161.03 in3
Stroke	190 mm	7.48 in
Compression Ratio	14.7:1	
Aspiration	TA	
Governor Type	Adem™3	
Fuel System	Electronic unit injection	

Benefits and Features

Cat Diesel Engine

Reliable, rugged, durable design
Field-proven in thousands of applications worldwide
Four-stroke-cycle diesel engine combines consistent performance and excellent fuel economy with minimum weight

Generator

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Matched to the performance and output characteristics of Cat engines
Industry leading mechanical and electrical design
Industry leading motor starting capabilities
High Efficiency

Cat EMCP Control Panel

The EMCP controller features the reliability and durability you have come to expect from your Cat equipment. EMCP4 is a scalable control platform designed to ensure reliable generator set operation, providing extensive information about power output and engine operation. EMCP4 systems can be further customized to meet your needs through programming and expansion modules.

Design Criteria

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

UL 2200 / CSA - Optional

UL 2200 listed packages
CSA Certified
Certain restrictions may apply.
Consult with your Cat® Dealer.

Single-Source Supplier

Fully prototype tested with certified torsional vibration analysis available

World Wide 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® SOSSM program cost effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by-products.

Standard Equipment

Air Inlet

- Air Cleaner

Cooling

- Package mounted radiator

Exhaust

- Exhaust flange outlet

Fuel

- Primary fuel filter with integral water separator
- Secondary fuel filter
- Fuel priming pump

Generator

- Matched to the performance and output characteristics of Cat engines
- IP23 Protection

Power Termination

- Bus Bar

Control Panel

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- EMCP 4 Genset Controller

General

- Paint - Caterpillar Yellow except rails and radiators gloss black

Optional Equipment

Exhaust

- Exhaust mufflers

Generator

- Anti-condensation heater
- Internal excitation (IE)
- Permanent magnet excitation (PMG)
- Oversize and premium generators

Power Termination

- Circuit breakers, UL listed
- Circuit breakers, IEC compliant

Control Panels

- EMCP 4.2
- EMCP 4.3
- EMCP 4.4
- Generator temperature monitoring & protection
- Load share module
- Digital I/O module
- Remote monitoring software

Mounting

- Rubber anti-vibration mounts
- Spring-type vibration isolator
- IBC isolators

Starting/Charging

- Battery chargers
- Oversize batteries
- Jacket water heater
- Heavy-duty starting system
- Charging alternator
- Air starting motor with control and silencer

General

- The following options are based on regional and product configuration:
- Seismic Certification per applicable building codes: IBC 2000, IBC 2003, IBC 2006, IBC 2009, CBC 2007
- UL 2200 package

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- EU Certificate of Conformance (CE)
- CSA Certification
- EEC Declaration of Conformity
- Enclosures: sound attenuated, weather protective
- Automatic transfer switches (ATS)
- Integral & sub-base fuel tanks
- Integral & sub-base UL listed dual wall fuel tanks

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ELECTRIC POWER - Technical Spec Sheet
STANDARD

3512C
1500 ekW/ 1875 kVA/ 60 Hz/ 1800 rpm/ 480 V/ 0.8 Power Factor

Rating Type: STANDBY

Emissions: U.S. EPA Certified for Stationary Emergency Use Only (Tier 2 Nonroad Equivalent Emission Standards)

Image shown may not reflect actual configuration

3512C

1500 ekW/ 1875 kVA

60 Hz/ 1800 rpm/ 480 V

	Metric	English
Package Performance		
Genset Power Rating with Fan @ 0.8 Power Factor	1500 ekW	
Genset Power Rating	1875 kVA	
Aftercooler (Separate Circuit)	N/A	N/A
Fuel Consumption		
100% Load with Fan	395.9 L/hr	104.6 gal/hr
75% Load with Fan	310.5 L/hr	82.0 gal/hr
50% Load with Fan	219.7 L/hr	58.0 gal/hr
25% Load with Fan	128.4 L/hr	33.9 gal/hr
Cooling System[1]		
Engine Coolant Capacity	156.8 L	41.4 gal
Inlet Air		
Combustion Air Inlet Flow Rate	139.8 m³/min	4937.2 cfm
Max. Allowable Combustion Air Inlet Temp	49 ° C	121 ° F
Exhaust System		
Exhaust Stack Gas Temperature	402.6 ° C	756.6 ° F
Exhaust Gas Flow Rate	332.3 m³/min	11734.1 cfm
Exhaust System Backpressure (Maximum Allowable)	6.7 kPa	27.0 in. water

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Rating Type: STANDBY

Emissions: U.S. EPA Certified for Stationary Emergency Use Only (Tier 2 Nonroad Equivalent Emission Standards)

Heat Rejection		
Heat Rejection to Jacket Water	502 kW	28541 Btu/min
Heat Rejection to Exhaust (Total)	1398 kW	79477 Btu/min
Heat Rejection to Aftercooler	519 kW	29539 Btu/min
Heat Rejection to Atmosphere from Engine	124 kW	7072 Btu/min
Heat Rejection to Atmosphere from Generator	74 kW	4208 Btu/min

Alternator[2]	
Motor Starting Capability @ 30% Voltage Dip	4350 skVA
Current	2255 amps
Frame Size	1447
Excitation	IE
Temperature Rise	150 ° C

Emissions (Nominal)[3]		
NOx	2373.9 mg/Nm³	5.5 g/hp-hr
CO	237.3 mg/Nm³	0.5 g/hp-hr
HC	51.7 mg/Nm³	0.1 g/hp-hr
PM	13.0 mg/Nm³	0.0 g/hp-hr

DEFINITIONS AND CONDITIONS

1. For ambient and altitude capabilities consult your Cat 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 Type: STANDBY

Emissions: U.S. EPA Certified for Stationary Emergency Use Only (Tier 2 Nonroad Equivalent Emission Standards)

Applicable Codes and Standards:
AS1359, CSA C22.2 No100-04, UL142,UL489, UL869, UL2200,
NFPA37, NFPA70, NFPA99, NFPA110, IBC, IEC60034-1, ISO3046, ISO8528,
NEMA MG1-22,NEMA MG1-33, 2006/95/EC, 2006/42/EC, 2004/108/EC.

Note: Codes may not be available in all model configurations. Please consult your local Cat Dealer representative for availability.

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.

Ratings are based on SAE J1349 standard conditions. These ratings also apply at ISO3046 standard conditions

Fuel Rates are based on fuel oil of 35º API [16º C (60º F)] gravity having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 29º C (85º 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.

www.Cat-ElectricPower.com

Performance No.: DM8260-06

Feature Code: 512DR9B

Generator Arrangement: 3838418

Date: 09/23/2016

Source Country: U.S.

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