



Image shown may not reflect actual package.

STANDBY

**800 e kW 1000 kVA
60Hz 1800rpm 480Volts**

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 Certified for Stationary Emergency Application (EPA Tier 2 emissions levels)

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.

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•SSM program cost effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by-products

CAT C27ATAAC 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 CONTROL PANELS

- Simple user friendly interface and navigation
- Scalable system to meet a wide range of customer needs
- Integrated Control System and Communications Gateway

SEISMIC CERTIFICATION

- Seismic Certification available
- Anchoring details are site specific, and are dependent on many factors such as generator set size, weight, and concrete strength. IBC Certification requires that the anchoring system used is reviewed and approved by a Professional Engineer
- Seismic Certification per Applicable Building Codes: IBC 2000, IBC 2003, IBC 2006, IBC 2009, CBC 2007
- Pre-approved by OSHPD and carries an OSP-0084-10 for use in healthcare projects in California

STANDBY 800 ekW 1000 kVA

60 Hz 1800rpm 480Volts



FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

| System | Standard | Optional |
|-------------------|--|--|
| Air Inlet | • Air cleaner | |
| Cooling | • Package mounted radiator | |
| Exhaust | • Exhaust flange outlet | <input type="checkbox"/> Exhaust mufflers |
| Fuel | • Primary fuel filter with integral water separator • Secondary fuel filters • Fuel priming pump | |
| Generator | • Matched to the performance and output characteristics of Cat engines | <input type="checkbox"/> Oversize and premium generators <input type="checkbox"/> Permanent magnet excitation (PMG) <input type="checkbox"/> Internal excited (IE) <input type="checkbox"/> Anti-condensation space heaters |
| Power Termination | • Bus bar | <input type="checkbox"/> Circuit breakers, UL listed <input type="checkbox"/> Circuit breakers, IEC compliant |
| Control Panel | • EMCP 4 Genset Controller | <input type="checkbox"/> EMCP 4.2 <input type="checkbox"/> EMCP 4.3 <input type="checkbox"/> EMCP 4.4 <input type="checkbox"/> Generator temperature monitoring and protection <input type="checkbox"/> Load share module <input type="checkbox"/> Digital I/O module <input type="checkbox"/> Remote monitoring software |
| Mounting | | <input type="checkbox"/> Rubber vibration isolators |
| Starting/Charging | | <input type="checkbox"/> Battery chargers <input type="checkbox"/> Oversize batteries <input type="checkbox"/> Jacket water heater <input type="checkbox"/> Heavy duty starting system <input type="checkbox"/> Charging alternator |
| General | • Paint - Caterpillar Yellow except rails and radiators gloss black | The following options are based on regional and product configuration: <input type="checkbox"/> Seismic Certification per Applicable Building Codes: IBC 2000, IBC 2003, IBC 2006, IBC 2009, CBC 2007 <input type="checkbox"/> EU Certificate of Conformance (CE) <input type="checkbox"/> UL 2200 package <input type="checkbox"/> CSA Certification <input type="checkbox"/> EEC Declaration of Conformity <input type="checkbox"/> Enclosures- sound attenuated, weather protective <input type="checkbox"/> Automatic transfer switches (ATS) <input type="checkbox"/> Integral & sub-base fuel tanks <input type="checkbox"/> Integral & sub-base UL listed dual wall fuel tanks |

STANDBY 800 ekW 1000 kVA

60 Hz 1800rpm 480Volts



SPECIFICATIONS

CAT GENERATOR

Frame size 1268
Excitation Permanent Magnet
Pitch 0.6667
Number of poles 4
Number of bearings Single bearing
Number of Leads 012
Insulation UL 1446 Recognized Class H with tropicalization and antiabrasion
- Consult your Caterpillar dealer for available voltages
IP Rating Drip Proof IP23
Alignment Pilot Shaft
Overspeed capability 150
Wave form Deviation (Line to Line) Less than 5% deviation
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)

CAT DIESEL ENGINE

C27 TA, V-12, 4-Stroke Water-cooled Diesel
Bore 137.20 mm (5.4 in)
Stroke 152.40 mm (6.0 in)
Displacement 27.03 L (1649.47 in³)
Compression Ratio 16.5:1
Aspiration TA
Fuel System MEUI
Governor Type ADEM™ A4

CAT EMCP 4 SERIES CONTROLS

EMCP 4 controls including:

- Run / Auto / Stop Control
- Speed and Voltage Adjust
- Engine Cycle Crank
- 24-volt DC operation
- Environmental sealed front face
- Text alarm/event descriptions

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)
- ekW, kVA, kVAR, kW-hr, %kW, PF

Warning/shutdown with common LED indication of:

- 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:

- Six digital inputs (4.2 only)
- Four relay outputs (Form A)
- Two relay outputs (Form C)
- Two digital outputs
- Customer data link (Modbus RTU)
- Accessory module data link
- Serial annunciator module data link
- Emergency stop pushbutton

Compatible with the following:

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

STANDBY 800 ekW 1000 kVA

60 Hz 1800rpm 480Volts



TECHNICAL DATA

| Open Generator Set - - 1800rpm/60 Hz/480 Volts | DM7696 | |
|---|---|--|
| EPA Certified for Stationary Emergency Application (EPA Tier 2 emissions levels) | | |
| Generator Set Package Performance Genset Power rating @ 0.8 pf Genset Power rating with fan | 1000 kVA 800 ekW | |
| Fuel Consumption 100% load with fan 75% load with fan 50% load with fan | 216.9 L/hr 171.7 L/hr 122.3 L/hr | 57.3 Gal/hr 45.4 Gal/hr 32.3 Gal/hr |
| Cooling System¹ Air flow restriction (system) Engine coolant capacity | 0.12 kPa 55.0 L | 0.48 in. water 14.5 gal |
| Inlet Air Combustion air inlet flow rate | 62.8 m ³ /min | 2217.8 cfm |
| Exhaust System Exhaust stack gas temperature Exhaust gas flow rate Exhaust flange size (internal diameter) Exhaust system backpressure (maximum allowable) | 511.4 °C 170.3 m ³ /min 203 mm 10.0 kPa | 952.5 °F 6014.1 cfm 8 in 40.2 in. water |
| Heat Rejection 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 | 330 kW 796 kW 162 kW 110 kW 40.3 kW | 18767 Btu/min 45268 Btu/min 9213 Btu/min 6256 Btu/min 2293.9 Btu/min |
| Alternator² Motor starting capability @ 30% voltage dip Frame Temperature Rise | 3641 skVA 1268 125 °C | 225 °F |
| Lube System Sump refill with filter | 68.0 L | 18.0 gal |
| Emissions (Nominal)³ NOx g/hp-hr CO g/hp-hr HC g/hp-hr PM g/hp-hr | 5.18 g/hp-hr .23 g/hp-hr .03 g/hp-hr .024 g/hp-hr | |

¹ For ambient and altitude capabilities consult your Cat dealer. Air flow restriction (system) is added to existing restriction from factory.

² Generator temperature rise is based on a 40°C ambient per NEMA MG1-32. UL 2200 Listed packages may have oversized generators with a different temperature rise and motor starting characteristics.

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.

STANDBY 800 ekW 1000 kVA

60 Hz 1800rpm 480Volts



RATING DEFINITIONS AND CONDITIONS

Applicable Codes and Standards: AS1359, CSA C22.2 No 100-04, UL142, UL489, UL601, UL869, UL2200, NFPA 37, NFPA 70, NFPA 99, NFPA 110, IBC, IEC60034-1, ISO3046, ISO8528, NEMA MG 1-22, NEMA MG 1-33, 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.

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 or 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.).

STANDBY 800 ekW 1000 kVA

60 Hz 1800rpm 480Volts



DIMENSIONS

| Package Dimensions | | |
|--------------------|-----------|-----------|
| Length | 4141.6 mm | 163.05 in |
| Width | 1823.3 mm | 71.78 in |
| Height | 2210.5 mm | 87.03 in |

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

www.Cat-ElectricPower.com

2013 Caterpillar
All rights reserved.

Feature Code: C27DR70

Gen. Arr. Number: 385-0624

Source: U.S. Sourced

LEHE0452-00 (08/13)

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

CAT, CATERPILLAR, their respective logos, "Caterpillar Yellow," the "Power Edge" trade dress, as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.