# C32 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 | 830 ekW |
| Maximum Rating | 1000 ekW |
| Voltage | 220 to 4160 |
| Frequency | 60 Hz |
| Speed | 1800 RPM |

| Generator Set Configurations | |
|---|---|
| Emissions/Fuel Strategy | Low Fuel Consumption, Low Emissions, EPA Certified for Stationary Emergency Application (Emits Equivalent U.S. EPA Tier 2 Nonroad Standards) |

| Engine Specifications | | |
|---|---|---|
| Engine Model | C32 TA, V-12, 4-Stroke Water-Cooled Diesel | |
| Bore | 145 mm | 5.71 in |
| Displacement | 32.1 L | 1958.86 in³ |
| Stroke | 162 mm | 6.38 in |
| Compression Ratio | 15.0:1 | |
| Aspiration | TA | |
| Governor Type | Adem™A4 | |
| Fuel System | MEUI | |

## 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


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### Generator

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.

### 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, CBC 2010
Pre-approved by OSHPD and carries an OSP-0321-10 for use in healthcare projects in California

## 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
- Load adjustment module provides engine relief upon load impact and improves load acceptance and recovery time
- IP23 Protection

### Power Termination

- Bus Bar

### Control Panel

- EMCP 4 Genset Controller

### General

- Paint - Caterpillar Yellow except rails and radiators gloss black


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## Optional Equipment

### Exhaust

- Exhaust mufflers

### Generator

- Excitation: [ ] Permanent Magnet Excited (PM) [ ] Internally Excited (IE)
- Anti-condensation heater
- Oversize and premium generators

### Power Termination

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

### Control Panels

- EMCP (4.2) (4.3) (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
- 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


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- Integral & sub-base UL listed dual wall fuel tanks

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# ELECTRIC POWER - Technical Spec Sheet
STANDARD

C32

910 ekW/ 1137 kVA/ 60 Hz/ 1800 rpm/ 480 V/ 0.8 Power Factor

**Rating Type: PRIME**

**Fuel Strategy: LOW FUEL CONSUMPTION**



Image shown may not reflect actual configuration

**C32**

**910 ekW/ 1137 kVA**

**60 Hz/ 1800 rpm/ 480 V**

| | Metric | English |
|---|---|---|
| **Package Performance** | | |
| Genset Power Rating with Fan @ 0.8 Power Factor | 910 ekW | |
| Genset Power Rating | 1137 kVA | |
| Aftercooler (Separate Circuit) | N/A | N/A |
| **Fuel Consumption** | | |
| 100% Load with Fan | 238.6 L/hr | 63.0 gal/hr |
| 75% Load with Fan | 179.2 L/hr | 47.3 gal/hr |
| 50% Load with Fan | 125.8 L/hr | 33.2 gal/hr |
| 25% Load with Fan | 75.9 L/hr | 20.0 gal/hr |
| **Cooling System[1]** | | |
| Engine Coolant Capacity | N/A | N/A |
| **Inlet Air** | | |
| Combustion Air Inlet Flow Rate | 77.8 m³/min | 2746.7 cfm |
| Max. Allowable Combustion Air Inlet Temp | 44 ° C | 111 ° F |
| **Exhaust System** | | |
| Exhaust Stack Gas Temperature | 456.1 ° C | 853.0 ° F |
| Exhaust Gas Flow Rate | 196.0 m³/min | 6922.5 cfm |
| Exhaust System Backpressure (Maximum Allowable) | 6.7 kPa | 27.0 in. water |


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Rating Type: PRIME

Fuel Strategy: LOW FUEL CONSUMPTION

| Heat Rejection | | |
|---|---|---|
| Heat Rejection to Jacket Water | 324 kW | 18431 Btu/min |
| Heat Rejection to Exhaust (Total) | 866 kW | 49230 Btu/min |
| Heat Rejection to Aftercooler | 213 kW | 12110 Btu/min |
| Heat Rejection to Atmosphere from Engine | 128 kW | 7274 Btu/min |
| Heat Rejection to Atmosphere from Generator | 50 kW | 2838 Btu/min |

| Alternator[2] | |
|---|---|
| Motor Starting Capability @ 30% Voltage Dip | 2734 skVA |
| Current | 1368 amps |
| Frame Size | 1402 |
| Excitation | IE |
| Temperature Rise | 105 ° C |

| Emissions (Nominal)[3] | | |
|---|---|---|
| NOx | 3019.6 mg/Nm³ | 6.1 g/hp-hr |
| CO | 101.9 mg/Nm³ | 0.2 g/hp-hr |
| HC | 5.3 mg/Nm³ | 0.0 g/hp-hr |
| PM | 7.6 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: PRIME**

**Fuel Strategy: LOW FUEL CONSUMPTION**

**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.

**PRIME:**Output available with varying load for an unlimited time. Average power output is 70% of the prime power rating. Typical peak demand is 100% of prime rated ekW with 10% overload capability for emergency use for a maximum of 1 hour in 12. Overload operation cannot exceed 25 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.: DM9940-02

Feature Code: C32DR45

Generator Arrangement: 4326118

Date: 06/13/2017

Source Country: U.S.

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