



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

Image shown may not reflect actual configuration

## Specifications

Generator Set Specifications	
Rating	320 ekW (400 kVA)
Voltage	415 Volts
Frequency	50 Hz
Speed	1500 rpm

Generator Set Configurations	
Emissions/Fuel Strategy	Meets India CPCB/MoEF Standards

Engine Specifications		
Engine Model	C13 ATAAC, 1-6, 4-Stroke Water-Cooled Diesel	
Bore	130 mm	5.17 in
Displacement	12.5 L	762.8 in <sup>3</sup>
Stroke	157 mm	6.18 in
Compression Ratio	16.6	
Aspiration	Air-to-Air-Aftercooled	
Governor Type	ADEM™A4	
Fuel System	MEUI™	

Package Dimensions*		
Length	5500 mm	216.5 in
Width	1800 mm	70.9 in
Height	2275 mm	89.6 in
Weight†	5700 kg	12566 lb

\*Note: For reference only – do not use for installation design. Please contact your local dealer for exact weight and dimensions.

†Weight includes: Oversize generator, skid base, circuit breaker, oil, and coolant.

## **Benefits & Features**

### **Cat® Diesel Engine**

- Uses ACERT™ Technology
- Reliable, rugged, durable design
- Four-stroke cycle diesel engine combines consistent performance and excellent fuel economy with minimum weight
- Electronic engine control

### **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 Noise Enclosure**

- CPCB approved as per India regulations
- Noise Enclosure designed for easy access of all engine parts, and lube oil fumes disposal
- Lockable doors to ensure safety
- Non-igniting, self-extinguishing mineral wool 100 mm thick with resin bonded, used for noise and thermal insulation

### **Cat EMCP Control Panel**

The EMCP controller features the reliability and durability you have come to expect from your Cat equipment. EMCP 4 is a scalable control platform designed to ensure reliable generator set operation, providing extensive information about power output and engine operation. EMCP 4 systems can be further customized to meet your needs through programming and expansion modules.

### **Design Criteria**

- The generator set meets transient response and block loading steps as per ISO8528-5

### **Single-Source Supplier**

Fully prototype tested with certified torsional vibration analysis.

### **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 Caterpillar S•O•S<sup>SM</sup> program cost-effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by-products.

## **Standard Equipment**

### **Air Inlet**

- Single element cannister type air cleaner
- Service indicator

### **Cooling**

- Radiator fan and belt drive
- Fan and belt guard
- Coolant drain line with valve
- Coolant level sensor
- Cat extended life coolant

### **Exhaust**

- Dry exhaust manifold
- Flanged faced outlets
- Exhaust mufflers
- Stainless steel exhaust flex fittings

### **Fuel**

- Primary and secondary fuel filters
- Fuel priming pump
- Flexible fuel lines
- Engine fuel transfer pump
- Integrated fuel cooler
- Enclosure integrated fuel tank

### **Generator**

- Self excited
- Class H insulation
- Class H temperature rise
- Random Wound
- R450M voltage regulator
- Load Acceptance Module (LAM)
- Paralleling kit droop transformer
- Power terminal strip connections
- IP 23 protection

### **Governor**

- Electronic governor – ADEM™A4

## **Standard Equipment**

### **Control Panels**

- EMCP 4.1 Series generator set controller
- Speed adjust
- Emergency stop pushbutton

### **Lube**

- Lubricating oil and filter
- Oil drain line with valves
- Fumes disposal
- Gear type lube oil pump
- Lube oil level indicator (dipstick)

### **Mounting**

- Anti-vibration mounts

### **Starting/Charging**

- 24 volt starting motor
- Batteries with rack and cables
- 45 amp charging alternator

### **General**

- SAE standard rotation
- Flywheel – SAE No.14
- Flywheel housing – SAE No.1
- Paint – Caterpillar Yellow except rails and radiators gloss black

## **Optional Equipment**

### **Air Inlet**

- Heavy-duty air cleaner

### **Control Panels**

- EMCP 4.2

### **Starting System**

- 2nos 12V 100 AH battery
- Disconnect switch

**C13 ACERT™**  
**320 ekW/ 400 kVA/ 50 Hz/ 1500 rpm/ 415V/ 0.8 Power Factor**

**Rating Type: PRIME**

**Emissions: Meets India CPCB/MoEF Standards**



**C13 ACERT™**  
**320 ekW/ 400 kVA**  
**50 Hz/ 1500 rpm/ 415V**

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#### Package Performance

Generator Set Power Rating with Fan @ 0.8 Power Factor	320 ekW
Generator Set Power Rating	400 kVA

#### Fuel Consumption

100% Load With Fan	86.7 L/hr	22.9 g/hr
75% Load With Fan	69.4 L/hr	18.3 g/hr
50% Load With Fan	50.3 L/hr	13.3 g/hr

#### Cooling System¹

Engine Coolant Capacity	14.2 L	3.8 gal
Radiator Coolant Capacity	48.0 L	12.7 gal
Engine Coolant Capacity with Radiator/Exp Tank	62.2 L	16.4 gal
Air Flow (Max @ Rated Speed for Radiator Arrangement)	660 m³/min	23308 cfm

#### Inlet Air

Combustion Air Inlet Flow Rate	25.5 m³/min	899.6 cfm
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#### Exhaust System

Exhaust Stack Gas Temperature	501.9°C	935.4°F
Exhaust Gas Flow Rate	69.7 m³/min	2460 cfm
Exhaust System Backpressure (maximum allowable)	10 kPa	40.1 in water

## C13 ACERT™

320 ekW/ 400 kVA/ 50 Hz/ 1500 rpm/ 415V/ 0.8 Power Factor

Rating Type: PRIME

Emissions: Meets India CPCB/MoEF Standards

Heat Rejection		
Heat Rejection to Coolant (total)	122 kW	6940 Btu/min
Heat Rejection to Exhaust (total)	300 kW	17044 Btu/min
Heat Rejection to Atmosphere from Engine	66.5 kW	3783 Btu/min
Heat Rejection to Atmosphere from Generator	23 kW	1308 Btu/min

Alternator <sup>2</sup>		
Motor Starting Capability @ 30% Voltage Dip	960 skVA	
Frame	LC6124C	
Temperature Rise	125°C	225°F
Excitation	Self Excited	

Lube System		
Sump Refill with Filter	40 L	10.6 gal

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

<sup>2</sup> Generator temperature rise is based on a 40°C (104°F) ambient per NEMA MG1-32.

## DEFINITIONS AND CONDITIONS

## Applicable Codes and Standards:

ISO 3046, ISO 8528, IEC60034-1, IS4722

**Prime:** Output available with varying load for an unlimited time. Prime power in accordance with ISO 8528. 10% overload power in accordance with ISO 3046.

**Ratings** are based on SAE J1349 standard conditions. These ratings also apply at ISO 3046 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 when used at 29°C and weighing 838.9 g/liter.

Additional ratings may be available for specific customer requirements, contact your Cat representative for details.

Performance No.: EMO552-01  
Feature Code: C13DE37  
Generator Arrangement: 4524234  
Date: 08/11/2015  
Source Country: India

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