



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

Picture shown may not reflect actual configuration

## Specifications

Generator Set Specifications	
Rating	480 ekW 600 KVA
Voltage	415 Volts
Frequency	50 Hz
Speed	1500 rpm

Generator Set Configurations	
Emissions/Fuel Strategy	Certified to meet India CPCB norms

Engine Specifications		
Engine Model	C18 ATAAC, I-6, 4-Stroke Water-Cooled Diesel	
Bore	145 mm	5.71 in
Displacement	18.13 L	1106.36 in <sup>3</sup>
Stroke	183 mm	7.2 in
Compression Ratio	18:1	
Aspiration	Air-to-Air-Aftercooled	
Governor Type	ADEM™ A4	
Fuel System	MEUI™	

Package Dimensions*	
Length	6000 mm
Width	2000 mm
Height	2500 mm
Weight	6440 kg

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

## **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, lube oil, fumes disposal radiator drains
- 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 ISO 8528-5.

### **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 40-plus dealer branch stores operating in India. The Cat 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 canister-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
- Flanges

### **Fuel**

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

### **Generator**

- AREP excitation
- 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 (continued)**

### **Control Panels**

- EMCP 4.1 Series generator set controller
- Speed adjust
- Emergency stop push button

### **Lube**

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

### **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 that are gloss black)

## **Optional Equipment**

### **Air Inlet**

- Heavy-duty air cleaner

### **Control Panels**

- EMCP 4.2

**C18 ACERT  
480 ekW/ 600 kVA/ 50 Hz/ 1500 rpm/ 415V/ 0.8 Power Factor**

**Rating Type: PRIME**

**Emissions: Certified to meet India CPCB Norms**



Picture shown may not reflect actual configuration

**C18 ACERT  
480 ekW/ 600 kVA  
50 Hz/ 1500 rpm/ 415V**

**Package Performance**

Generator Set Power Rating with Fan @ 0.8 Power Factor	480 ekW
Generator Set Power Rating	600 kVA

**Fuel Consumption**

100% Load With Fan	127.2 L/hr
75% Load With Fan	100.6 L/hr
50% Load With Fan	70.0 L/hr

**Cooling System<sup>1</sup>**

Engine Coolant Capacity	20.8 L
Radiator Coolant Capacity	20.0 L
Engine Coolant Capacity with Radiator/Exp Tank	48.8 L
Air Flow (Max @ Rated Speed for Radiator Arrangement)	660 m <sup>3</sup> /min

**Inlet Air**

Combustion Air Inlet Flow Rate	37.8 m <sup>3</sup> /min
--------------------------------	--------------------------

**Exhaust System**

Exhaust Stack Gas Temperature	511°C
Exhaust Gas Flow Rate	105.3 m <sup>3</sup> /min
Exhaust System Backpressure (maximum allowable)	7 kPa
Exhaust Flange Size (internal diameter)	152.4 mm



**C18 ACERT  
480 ekW/ 600 kVA/ 50 Hz/ 1500 rpm/ 415V/ 0.8 Power Factor**

**Rating Type: PRIME**

**Emissions: Certified to meet India CPCB Norms**

<b>Heat Rejection</b>	
Heat Rejection to Coolant (total)	151 kW
Heat Rejection to Exhaust (total)	483 kW
Heat Rejection to Atmosphere from Engine	74.7 kW
Heat Rejection to Atmosphere from Generator	26.4 kW

<b>Alternator<sup>2</sup></b>	
Motor Starting Capability @ 30% Voltage Dip	1395 skVA
Frame	LC6124K
Temperature Rise	125°C
Excitation	Self-excited

<b>Lube System</b>	
Sump Refill with Filter	62 L

<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.

## DEFINITIONS AND CONDITIONS

### Applicable Codes and Standards:

ISO3046, ISO8528, 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 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 Cat representative for details.

[www.Cat-ElectricPower.com](http://www.Cat-ElectricPower.com)

©2016 Caterpillar  
All rights reserved.

Performance No. EM0553  
Feature Code: C18DFIT  
Generator Arrangement:4600312  
Date: 14/11/2016  
Source Country: India  
LEHE0828-02

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, ACERT, ADEM, S•O•S, MEUI, "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.