C15 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	320 ekW
Maximum Rating	500 ekW
Voltage	208 to 600 Volts
Frequency	60 Hz
Speed	1800 rpm

Generator Set Configurations	
Emissions/Fuel Strategy	Low Fuel Consumption, U.S. EPA Certified for Stationary Emergency Use Only (Tier 2 or Tier 3 Nonroad Equivalent Emission Standards), EU Stage IIIA Nonroad Emission Standards, China Nonroad III Emission Standards

Engine Specifications		
Engine Model	C15 ATAAC, I-6, 4-Stroke Water-Cooled Diesel	
Displacement	15.2 l	927.56 in³
Fuel System	MEUI	
Aspiration	Air to Air Aftercooled	
Governor Type	Adem™A4	
Compression Ratio	16.1:1	
Bore	137.2 mm	5.4 in
Stroke	171.4 mm	6.75 in

Generator Set Dimensions		
Length - Maximum	4273 mm	168.2 in
Width - Maximum	2058 mm	81 in
Height - Maximum	2092 mm	82.4 in

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Benefits and Features

Design Criteria

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

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

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.

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

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 System

- Air Cleaner - Non Canister disposable paper filter
- Aftercooler core
- Turbocharger

Control Panel

- EMCP 4.2

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Cooling System

- Radiator and cooling fan with guard
- Coolant drain line with valve
- Fan drive, battery charging alternator drive
- Caterpillar Extended Life Coolant

Exhaust

- Standard open set fuel tank / base supplied
- Base, formed steel with single wall integral 8-hour fuel tank

Fuel System

- Primary fuel filter w/integral water separator & secondary filter
- Fuel cooler
- Fuel priming pump
- Flexible fuel lines
- Engine fuel transfer pump

Generator and Attachments

- A frame generator - IP21 Protection
- Optional LC frame generator - IP23 Protection
- Integrated Voltage Regulator
- Power center, IP22
- Segregated low voltage (AC/DC) wiring panel
- Mandatory Option circuit breaker, IEC, 3 pole, mounted in power centre

Governing System

- Cat Electronic Governor (ADEM A4).

Lube System

- Oil cooler
- Oil drain valves

Mounting System

- Captive linear vibration isolators between base and engine-generator includes lifting provisions and termination points for coolant and lube oil drain lines

Starting/Charging

- 24 Volt battery with rack and cables

General

- Engine and alternator pre paint, Caterpillar yellow

Optional Equipment

Air Inlet System

- Single element air cleaner
- Dual element air cleaner

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Certifications

- EU certificate of conformance
- Global certification for CIS

Circuit breakers

- 3 Pole (IEC-100% rated) circuit breakers - Package mounted
- 4 Pole (IEC-100% rated) circuit breakers - Package mounted
- 3 Pole (IEC-100% rated) circuit breakers - Motorised
- 4 Pole (IEC-100% rated) circuit breakers - Motorised
- Auxiliary contacts, circuit breaker
- Shunt trip for IEC circuit breaker
- Pad-lockable circuit breaker device
- Power terminal strip

Control Panels

- EMCP 4.3, EMCP 4.4
- Volt free contacts
- Local alarm horn
- Oil temperature displays
- Protective devices: Earth fault relay ; Earth leakage ground fault relay ; Overload shutdown via breaker ; Low fuel level alarm ; Low fuel level shutdown ; High fuel level alarm ; Fuel level sensor
- Local annunciator
- Remote annunciator

Cooling System

- Radiator duct flange
- Stone guards
- Low coolant temperature alarm

Enclosures

- Sound attenuated enclosures
- High ambient sound attenuated enclosures

Exhaust System

- Engine mounted muffler
- End in / End out mufflers - 10, 25 and 35 dBA attenuation
- 6 and 8 inch flange GP
- Flexible exhaust fittings
- 6 and 8 inch elbow kit
- Manifold and turbocharger guard

Fuel System

- Dual wall fuel tank base
- Manual fuel transfer pump

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- Fuel transfer system controls

Generator and Attachments

- Ingress protection
- Permanent magnet generator
- Space heaters
- Oversize A frame generator
- CIP a frame generator
- LC frame generator
- Oversize LC frame generator
- LC frame CIP generator

Lube System

- Manual sump pump

Mounting System

- Narrow skid base - replaces standard fuel tank base

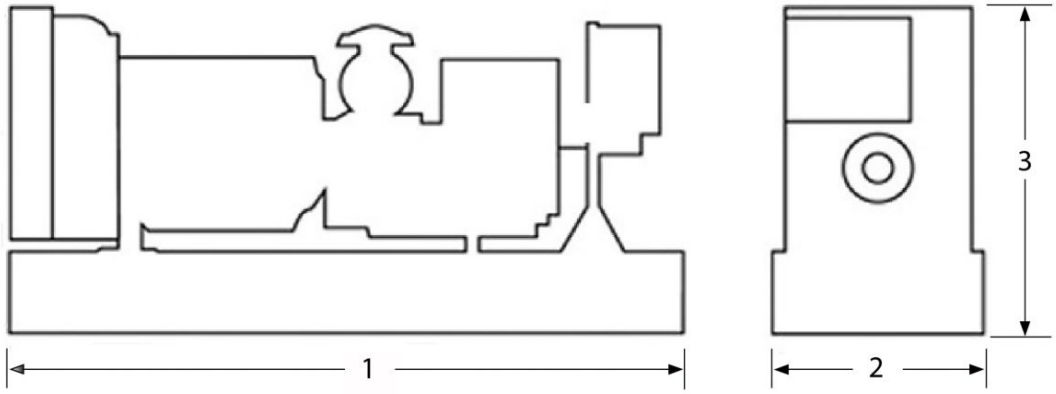
Special Test / Reports

- PGS Test report @ 1.0 power factor
- PGS Test report @ 0.8 power factor

Starting / Charging System

- 5 Amp single battery charger
- Battery disconnect switch
- Jacket water heater

Dimensional Art



Dimensions	Dimension 1	Dimension 2	Dimension 3
Packaged genset	4273 mm (168.2 in)	2058 mm (81.0 in)	2092 mm (82.4 in)

The International System of Units (SI) is used in this publication. CAT, CATERPILLAR, their respective logos, ADEM, EUI, S•O•S, "Caterpillar Yellow" and 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.

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