



C15 ACERT™ Diesel Oilfield Generator Set

450 ekW
60 Hz, 1800 rpm

PRIME

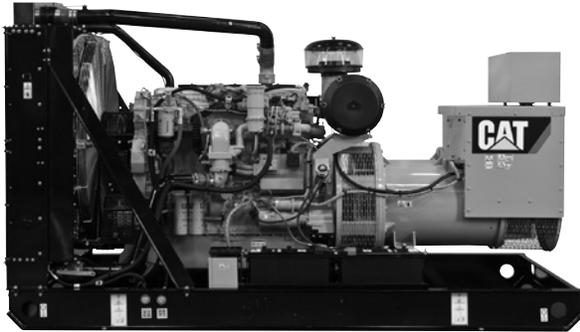


Image shown may not reflect actual engine configuration

CAT® ENGINE SPECIFICATIONS

I-6, 4-Stroke-Cycle diesel

Emissions	U.S. EPA Tier 4 Interim
Bore	137.2 mm (5.41 in)
Stroke	177.5 mm (6.75 in)
Displacement	15.2 L (927.6 in ³)
Compression Ratio.....	16.1:1
Aspiration	Turbocharged-Aftercooled
Fuel System.....	MEUI
Governor Type.....	ADEM™ A4
Package Weight.....	4726 kg (10,420 lbs)

FEATURES

Emissions

- Meets U.S. EPA Tier 4 Interim without the use of aftertreatment
- Uses an on-engine NOx reduction system (NRS) for emissions compliance

Engine Design

- Rugged components for durability in harsh oilfield conditions
- Increased power density and rugged base for highly mobile jobs
- Random wound, close coupled, oversized generator ideal for camp power applications
- Heavy-duty, easy-to-clean cooling system with high ambient capability
- Advanced controls
- Focus on operator safety

Advanced Digital Engine Management

ADEM A4 control system providing integrated ignition, speed governing, protection, and controls. ADEM A4 has improved: user interface, display system, shutdown controls, and system diagnostics.

Cat® EMCP 4.2 Series Control Panels

- Integrated control system and communications gateway
- EMCP 4.2 is standard and offers basic engine/generator monitoring, metering and protection and an open protocol allowing for simple integration.
- Also features more advanced options including power metering, modbus capability, and programmable discrete output

Product Support Offered Through Global Cat Dealer Network

- More than 2,200 dealer outlets
- Cat factory-trained dealer technicians service every aspect of your petroleum engine
- Cat parts and labor warranty

Preventive maintenance agreements available for repair-before-failure options

S•O•SSM program matches your oil and coolant samples against Caterpillar set standards to determine:

- Internal engine component condition
- Presence of unwanted fluids
- Presence of combustion by-products
- Site-specific oil change interval

Over 80 Years of Engine Manufacturing Experience

Ownership of these manufacturing processes enables Caterpillar to produce high quality, dependable products.

- Cast engine blocks, heads, cylinder liners, and flywheel housings
- Machine critical components
- Assemble complete engine

Web Site

For all your petroleum power requirements, visit www.catoilandgas.cat.com.



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STANDARD EQUIPMENT

Air Inlet System

Heavy-duty dual element air cleaner
Service indicator

Control Panels

EMCP 4.2
User interface panel — rear mount
Emergency stop pushbutton
Generator housing mounted

Cooling System

Radiator (50°C)
Side-by-side cores
Metal top and bottom tanks
Coolant drain line with valve
Fan and belt guards
Cat Extended Life Coolant
Coolant level sight gauge

Exhaust System

Dry exhaust manifold

Fuel System

Primary fuel filter
Secondary fuel filter
Fuel priming pump
Fuel transfer pump

Generators

Class H insulation
Self excited
IP23 protection
Random wound stator

Anti-condensation space heaters
Single bearing
Close coupled
Oversized
Platinum RTDs

Governor

ADEM™ A4

Lube System

Lubricating oil
Oil cooler
Oil drain line with valves
Fumes disposal — piped to front of radiator
Gear-type lube oil pump

Mounting System

Heavy-duty oilfield welded steel base (skiddable)
Anti-vibration mounts (installed)
Designed welded base for increased durability (C-channel design)
Dragability
Package lifting eyes

Starting/Charging System

24V starting motor(s)
45-amp charging alternator

General

Paint — Cat yellow except rails and radiators (gloss black)
SAE standard rotation
Flywheel and flywheel housing — SAE No. 1

OPTIONAL EQUIPMENT

Cooling System

Jacket water heater

Protection System

Air shutoff – guillotine style

Generators

Permanent magnet

Circuit Breakers

800 amp circuit breaker

Exhaust System

Exhaust manifold and turbocharger heat guarding
25 dBA and 35 dBA spark arresting mufflers
Expander

Starting/Charging System

Heavy-duty battery set
Battery disconnect switch

Space Heaters

Space heater controls



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SPECIFICATIONS

Cat SR4B Generator

Frame size 499
 Excitation Self Excited, PM Option
 Pitch..... 0.667
 Number of poles..... 4
 Number of bearings 1
 Number of leads 6
 Insulation UL 1446 Recognized Class H
 with tropicalization and antiabrasion
 IP Rating Drip Proof IP23
 Alignment Close Coupled

Cat EMCP 4.2 Series Control Panel

EMCP 4 controls
 Run/Auto/Stop control
 Speed adjust
 Voltage adjust
 Engine cycle crank
 Emergency stop pushbutton
 EMCP 4.2 controller
 24-volt DC operation
 Environmental sealed front face
 Text alarm/event descriptions
 True RMS AC metering, 3-phase, ±1% accuracy
 Digital indication for:
 rpm
 DC volts
 Operating hours
 Oil pressure (psi, kPa, or bar)
 Coolant temperature
 Volts (L-L and L-N), frequency (Hz)
 Amps (per phase and average)
 Power Factor (per phase and average)
 kW (per phase, average, and percent)
 kVA (per phase, average, and percent)

kVA (per phase, average, and percent)
 kW-hr (total)
 kVA-hr (total)
 Warning/shutdown with common LED indication
 of shutdowns for:
 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 (kVA) (32RV)
 Overcurrent (50/51)
 Communications
 Customer data link (Modbus RTU)
 Accessory module data link
 Serial annunciator module data link
 6 programmable digital inputs
 4 programmable relay outputs (Form A)
 2 programmable relay outputs (Form C)
 2 programmable digital outputs
 Compatible with the following optional modules:
 Digital I/O module
 Local annunciator
 Remote CAN annunciator
 Remote serial annunciator
 RTD module
 Thermocouple module

C15 ACERT OILFIELD GENERATOR SET PACKAGES

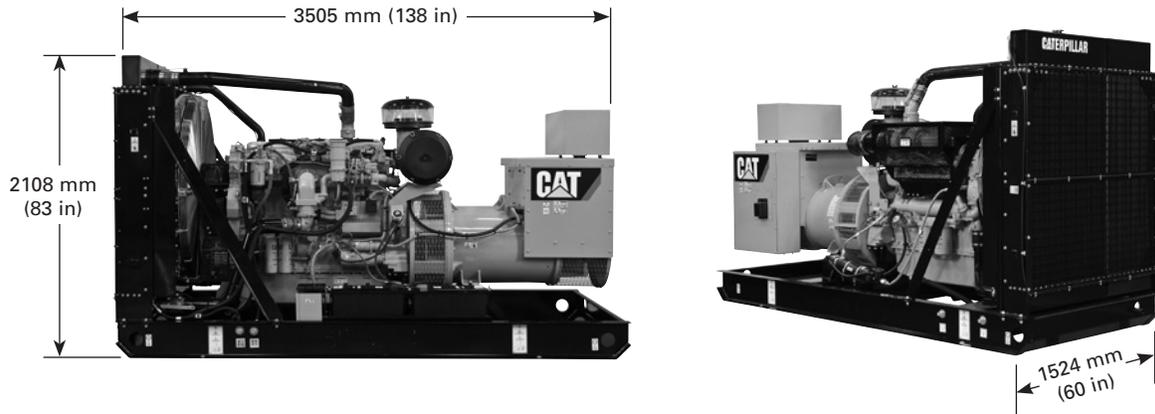
ekW Rating	450
kVA Rating	562.5
rpm	1800
Rated PF	0.8
Temperature Rise	105°C
Insulation Class	H
Overload Capacity	110% of rated ekW
Excitation	Self Excited, PM Option
Voltage	480
Voltage Regulator	Cat DVR
Configuration	1-Brg
Coastal Protection	Yes
Space Heater	Yes
Construction	Random Wound
Frame Size	499
Emissions	U.S. EPA Tier 4 Interim



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DIMENSIONS



Package Dimensions		
Length	3505 mm	138 in
Width	1524 mm	60 in
Height	2108 mm	83 in
Engine Weight (dry)	4726 kg	10,420 lb

Note: For reference only — do not use for installation design.

RATING DEFINITIONS AND CONDITIONS

Meets or Exceeds International Specifications: AS1359, CSA, IEC60034, ISO3046, ISO8528, NEMA MG 1-33, UL508A, 98/37/EC.

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. Prime power in accordance with ISO3046. Prime ambients shown indicate ambient temperature at 100% load which results in a coolant top tank temperature just below the alarm temperature.

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. For information regarding low sulfur fuel and biodiesel capability, please consult your Cat dealer.

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, "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.