



C32 ACERT™ Diesel Oilfield Generator Set

910 kW
60 Hz, 1800 rpm
1000 kVA
50 Hz, 1500 rpm

PRIME

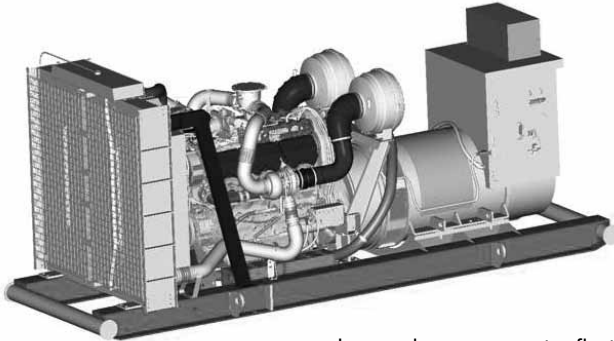


Image shown may not reflect
actual engine configuration

CAT® ENGINE SPECIFICATIONS

V-12, 4-Stroke-Cycle water-cooled diesel

Bore 145 mm (5.71 in)
Stroke 162 mm (6.38 in)
Displacement 32.10 L (1958.86 in³)
Compression Ratio..... 15:1
Aspiration Turbocharged-Aftercooled
Fuel System..... MEUI
Governor Type..... ADEM™ A4
Package Weight..... 9299 kg (20,500 lbs)

FEATURES

Fuel/Emissions Strategy

- Configuration options to take advantage of fuel economies or emissions reductions (non-certified, U.S. EPA Non-road Tier 2 levels) available to fit any application

Engine Design

- Rugged components for durability in harsh oilfield conditions
- Increased power density and rugged base for highly mobile jobs
- Permanent magnet, two-bearing, close coupled, oversized generator ideal for oilfield 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 3 Series Control Panels

- Integrated control system and communications gateway
- EMCP 3.1 is standard and offers basic engine/generator monitoring, metering and protection
- EMCP 3.2 and 3.3 available for more sophisticated 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 canister-type air cleaner
Service indicator

Control Panels

EMCP 3.1
User interface panel — rear mount
Emergency stop pushbutton
Generator housing mounted
Load share module

Cooling System

Radiator with guard sized for 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 sensor

Exhaust System

Dry exhaust manifold
Flanged faced outlets

Fuel System

Primary fuel filter with water separator
Secondary fuel filter
Fuel priming pump
Flexible fuel lines
Fuel cooler

Generators

Class H insulation
Class F temperature (80°C prime)
Winding temperature detectors (select models)
Self excited
IP23 protection
Form wound stator
Anti-condensation space heaters

Governor

ADEM™ A4

Lube System

Lubricating oil and filter
Deep sump oil pan
Oil drain line with valves
Fumes disposal
Gear-type lube oil pump

Mounting System

Heavy-duty oilfield welded steel base
Anti-vibration mounts (shipped loose)
Designed welded base for increased durability (I-beam design)
Dragability

Power Termination

Bus bar (NEMA and IEC mechanical lug holes) — right-side standard
Bottom cable entry; capable of top cable entry

Starting/Charging System

24V starting motor(s)
24V, 45-amp charging alternator
Batteries with rack and cables
Battery disconnect
Oversize batteries

General

Right-hand service
Paint — Cat yellow except rails and radiators (gloss black)
SAE standard rotation
Flywheel and flywheel housing — SAE No. 0

OPTIONAL EQUIPMENT

Air Inlet System

Air inlet adapters
Precleaners

Control Panels

EMCP 3.2
Right or left mount user interface panel
Annunciator panel option
Generator temperature monitoring and protection
EMCP 3.3
Local and remote annunciator modules
Discreet I/O module

Cooling System

Radiator with ambient capability (50°C)
Jacket water heater

Exhaust System

Stainless steel exhaust flex fittings
Elbows, flanges, expanders, and Y adapter

Generators

Oversize and premium generators
Permanent magnet excitation

Governor

Load share module (optional with direct rack)

Starting/Charging System

Battery chargers (10 amp)

General

CSA certification
EU Declaration of Incorporation
EEC Declaration of Incorporation



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SPECIFICATIONS

Cat SR4B Generator

Frame size 696
Excitation Self excited
Pitch 0.666
Number of poles 4
Number of bearings 2
Number of leads 6
Insulation UL 1446 Recognized Class H
with tropicalization and antiabrasion
IP Rating Drip Proof IP23
Alignment Close Coupled
Overspeed capability 180% of rated
Wave form 003.00
Voltage regulator 3-phase sensing
with selectable volts/Hz
Voltage regulation.. Less than $\pm 1/2\%$ (steady state)
Less than $\pm 1\%$ (no load to full load)
Harmonic Distortion Less than 5%

Cat EMCP 3 Series Control Panel

12-24 volt (nominal) DC control
Run/auto/stop control
Display size 24 x 95 mm
Display size 33 x 132 pixels
Display available in any of 26 languages with text
translation capability
Temperature operating range -40°C to 70°C
(display to -20°C)

Designed for mounting on generator set package
(vibration tested to 4.3G sinusoidal and 15G
shock)

3-phase, true RMS metering

Generator metering accuracy ($\pm 2\%$)

Metering — L-L volts, L-N volts, phase amps, Hz

Digital indications for rpm, operating hours, oil
pressure, coolant temperature and system DC
voltage

LED indicators for warning/shutdown alarms
(low oil pressure, high coolant temperature, low
coolant, overspeed, etc.)

Reset all events function

Voltage adjust when Cat DVR is on J1939 data
link

Integrates with ADEM engine governor for engine
monitoring, alarms, and control

Integrates with Cat DVR for alarms and control
Compatible with Cat ET service tool for enhanced
serviceability including data capturing from event
log, data logging, set point programming and
troubleshooting

Field re-flashable software ensures the customers
get the latest updated software

Programmable switch inputs

Programmable relay outputs (2A continuous DC)

C32 ACERT OILFIELD GENERATOR SET PACKAGES

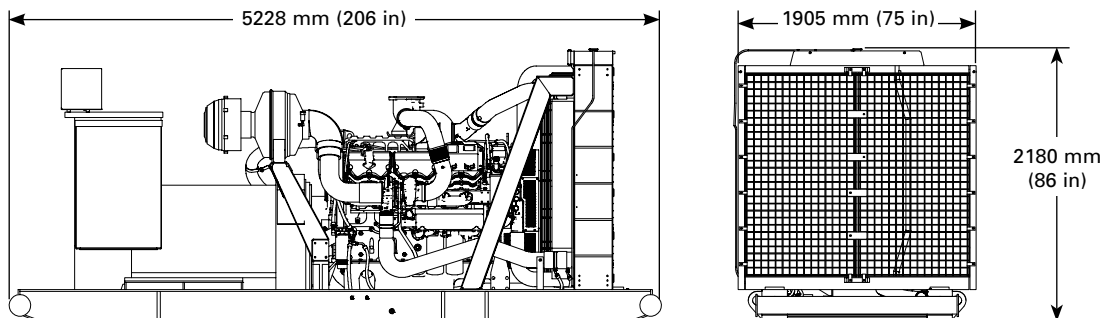
	50 Hz	60 Hz
ekW Rating	—	910
kVA Rating	1000	—
rpm	1500	1800
Rated PF	0.7, 0.8	0.7, 0.8
Temperature Rise	80°C	80°C
Insulation Class	H	H
Overload	300%/10 sec	300%/10 sec
Excitation	SE, PMG option	SE, PMG option
Voltage	600	600
Voltage Regulator	Cat DVR	Cat DVR
Configuration	2-Brg	2-Brg
Coastal Protection	Yes	Yes
Space Heater	Yes	Yes
Construction	FW	FW
Frame Size	696	696



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DIMENSIONS



Package Dimensions		
Length	5228 mm	206 in
Width	1905 mm	75 in
Height	2180 mm	86 in
Engine Weight (dry)	9299 kg	20,500 lb

Note: For reference only — do not use for installation design.
See general dimension drawing #3716011 for detail.

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.