

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

Image shown is for Radiator version and will be different for Heat Exchanger version

Specifications

Generator Set Specifications	
Rating (eKW)	1600
Rating (kVA)	2000
Voltage	415 Volts
Frequency	50 Hz
Speed	1500 rpm

Generator Set Configurations	
Emissions/Fuel Strategy	Low Fuel Consumption

Engine Specifications	
Engine Model	3516B TA,V16, 4-stroke Water-cooled Diesel
Bore	170 mm
Displacement	69 L
Stroke	190 mm
Compression Ratio	14.0:1
Aspiration	Turbocharged Aftercooled
Governor Type	ADEM™ A3
Fuel System	Electronic unit injection

Benefits & Features

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. 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 step as per ISO 8528-5

Single - Source Supplier

Fully Prototype tested with certified torsional vibration analysis

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.

Standard Equipment

Air Inlet

- Single Element Canister type Air cleaner
- Service Indicator

Cooling

- Package-mounted SCAC radiator/ Heat Exchanger
- Radiator Fan and Belt drive *
- Fan and Belt Guard *
- Coolant Drain valve

Exhaust

- Dry Exhaust manifold
- Flange faced outlets
- Mufflers
- Stainless Steel Exhaust Flex Fitting
- Flanges

Fuel

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

Generator

- Matched to the performance and output characteristics of Cat engines
- IP23 Protection
- AREP Excitation
- Class H Insulation, Class H temperature Rise
- Random wound
- R449 voltage Regulator with R731 3 phase
- Load Acceptance Module (LAM)
- Droop Kit
- Winding temperature Detector
- Bearing temperature Detector
- Anticondensation Heater

Power Termination

- Bus Bar
- Right Side Standard
- Top and Bottom Cable Entry

Control Panel

- EMCP 4.2 Genset Controller
- Voltage and Speed Adjust
- Emergency Stop Button
- User Interface Panel (UIP) - Rear Mount

Mounting

- Anti-Vibration Mounts

* To be used only with Radiator Package



Starting/Charging

- Batteries with mounting Rack and cables (Standard)
- Charging Alternator - 45 Amps, 24 volts
- Heavy Duty starting system - 24 Volts

General

- 990 liter fuel tank
- Paint- Caterpillar Yellow except rails and radiators gloss black

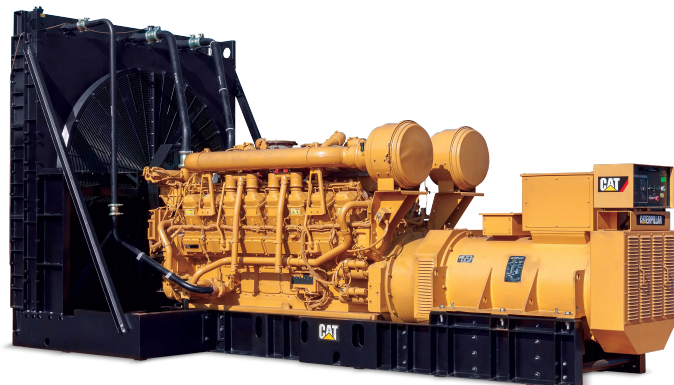
Optional Equipment

- Air starting motor with control and silencer
- Jacket water Heater
- Barring tool Device
- Remote mounted Radiator
- Air Inlet shutoff
- Duplex Fuel Filter
- Heavy -duty air cleaner
- Option for remote mounting of UIP
- Over size Generator
- Electric Pre lub pump
- Duplex oil Filter

3516B
1600 ekW/ 2000 kVA/ 50 Hz/ 1500 rpm/ 415V/ 0.8 Power Factor

Rating Type: PRIME

Fuel Strategy: Low Fuel Consumption



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1600 ekW/ 2000 kVA
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Package Performance		
Generator Set Power Rating with Fan @ 0.8 Power Factor	1600 ekW	
Generator Set Power Rating	2000 kVA	
Aftercooler (separate circuit)	90°C (RAD)	60°C (HEX)

Fuel Consumption	Radiator	Heat Exchanger
100% Load	402.5 L/hr	390L/Hr
75% Load	304.5 L/hr	294.4L/Hr
50% Load	213.4 L/hr	210 L/Hr

Cooling System		
Engine Coolant Capacity	275 L	
Coolant capacity with Radiator	590 L	
Inlet Air		
Combustion Air Inlet Flow Rate	119.1 m ³ /min (RAD)	122.1 m ³ /min(HEX)
Max. Allowable Combustion Air Inlet Temp	99°C	

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Exhaust System	Radiator	Heat Exchanger
Exhaust Stack Gas Temperature	509°C	476°C
Exhaust Gas Flow Rate	327.2 m³/min	320.5 m³/min
Exhaust System Backpressure (maximum allowable)	6.7 kPa	6.7 kPa

Heat Rejection	Radiator	Heat Exchanger
Heat Rejection to Jacket Water	661 kW	623 kW
Heat Rejection to Exhaust (total)	1511 kW	1433 kW
Heat Rejection to Aftercooler	245 kW	298 kW
Heat Rejection to Atmosphere from Engine	150 kW	130 kW
Heat Rejection to Atmosphere from Generator	69 kW	69 kW

Alternator	
Motor Starting Capability @ 30% Voltage Dip	3780 skVA
Current	2783 amps
Frame Size	DSG74L
Excitation	AREP
Temperature Rise	125°C

For ambient and altitude capabilities consult your Cat dealer. Air flow restriction (system) is added to existing restriction from factory. Generator temperature rise is based on a 40°C (104°F) ambient .

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DEFINITIONS AND CONDITIONS

Applicable Codes and Standards:

ISO3046, ISO8528, IEC60034-1, IS4722.

Note: Codes may not be available in all model configurations. Please consult your local Cat dealer representative for availability.

PRIME: Output available with varying load for 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] gravity having an LHV of 42,780 kJ/kg when used at 29°C 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.

www.cat.com/electricpower

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