

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

Image shown is for radiator version.
Images shown might not reflect actual configuration

Specifications

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

Generator Set Configuration	
Emissions / Fuel Strategy	Low Fuel Consumption

Engine Specifications	
Engine Model	35162B 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.
Conforms to ISO 8528-5 G3 load acceptance requirements.

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.
- Form wound.
- R 449 voltage regulator with R 731 3-phase sensing module
- 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 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 liters fuel tank.
- Paint – Caterpillar Yellow except rails and Heat exchanger in 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.
- Duplex oil filter.
- Electric pre-lube pump.

3516B

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

Rating Type: Prime

Fuel Strategy: Low Fuel Consumption

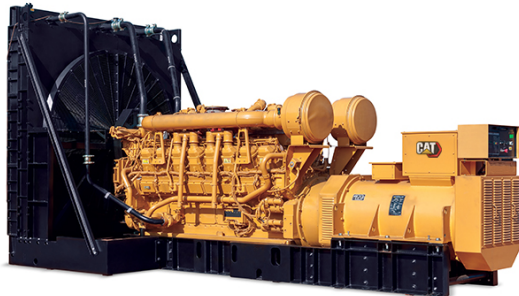


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Package Performance

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	390 L /hr
75% load	304.5 L/hr	294.4 L /hr
50% load	213.4 L/hr	210 L /hr

Cooling System

Engine coolant capacity	275 L
Coolant capacity with radiator	590 L

Air intake system	Radiator	Heat exchanger
Combustion Air inlet flow rate	119.1 m ³ /min	122.1m ³ /min
Max. Allowable combustion Air inlet temp	49°C	

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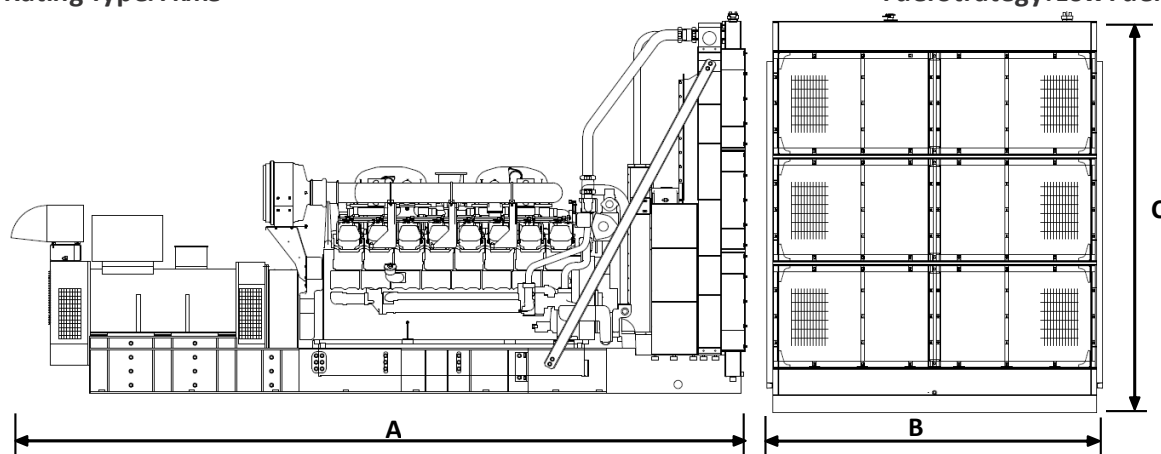
Fuel Strategy: Low Fuel Consumption

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 back pressure (max. 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 at 0.4PF	3780 skVA
Current	2783 Amps
Frame size	DSG 74L1
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.

3516B**1600 ekW/2000 kVA/ 50 Hz/ 1500 rpm/ 415V/ 0.8 Power Factor****Rating Type: Prime****Fuel Strategy: Low Fuel Consumption**

Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Dry Weight kg (lb)
6562(258.35)	2850 (112.20)	3397.7 (133.71)	16,080(34,450)

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 ISO3046 standard conditions.

Fuel Rates are based on fuel oil of 35° API [16°C] gravity having a 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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Materials and specifications are subject to change without notice.
The International System of Units (SI) is used in this publication.

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