



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) | 1200 |
| Rating (kVA) | 1500 |
| Voltage | 415 Volts |
| Frequency | 50 Hz |
| Speed | 1500 rpm |

| Generator Set Configuration | |
|-----------------------------|----------------------|
| Emissions / Fuel Strategy | Low Fuel Consumption |

| Engine Specifications | |
|-----------------------|---|
| Engine Model | 3512B TA, V12, 4-stroke Water-cooled Diesel |
| Bore | 170 mm |
| Displacement | 51.8 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

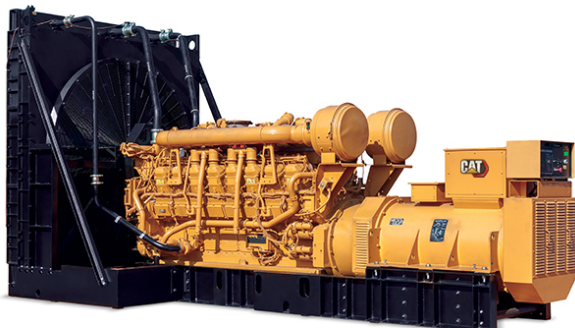
- Air starting motor with control and silencer.
- Jacket water heater.
- Barring tool device.
- Remote mounted radiator
- Air inlet shutoff.
- Duplex fuel filter
- Heavy-duty air cleaner.
- Option for remote mounting of UIP.
- Over size Generator.
- Duplex oil filter.
- Electric pre-lube pump.

3512B

1200 ekW / 1500 kVA / 50 Hz / 1500 rpm / 415V / 0.8 Power Factor

Rating Type: Prime

Fuel Strategy: Low Fuel Consumption



| Package Performance | | |
|--|-------------|-------------|
| Generator set power rating with Fan @ 0.8 power factor | 1200 ekW | |
| Generator set power rating | 1500 kVA | |
| Aftercooler (separate circuit) | 90 °C (Rad) | 60 °C (Hex) |

| Fuel Consumption | Radiator | Heat exchanger |
|------------------|------------|----------------|
| 100% load | 306 L/hr | 292.4 L /hr |
| 75% load | 238.2 L/hr | 221.7 L /hr |
| 50% load | 162.3 L/hr | 156.5 L /hr |

| Cooling System | |
|--------------------------------|-------|
| Engine coolant capacity | 195 L |
| Coolant capacity with radiator | 472L |

| Air intake system | Radiator | Heat exchanger |
|--|--------------------------|-------------------------------|
| Combustion Air inlet flow rate | 95.8 m ³ /min | 100 m ³ /min (Hex) |
| Max. Allowable combustion Air inlet temp | 47°C | |

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Fuel Strategy: Low Fuel Consumption

| Exhaust System | Radiator | Heat exchanger |
|---|---------------------------|-------------------------|
| Exhaust stack gas temperature | 492.5°C | 448°C |
| Exhaust gas flow rate | 259.2 m ³ /min | 253 m ³ /min |
| Exhaust system back pressure (max. allowable) | 6.7 kPa | 6.7 kPa |

| Heat Rejection | Radiator | Heat exchanger |
|---|----------|----------------|
| Heat Rejection to Jacket Water | 540 kW | 509 kW |
| Heat Rejection to Exhaust (total) | 1152 kW | 1102 kW |
| Heat Rejection to Aftercooler | 213 kW | 264 kW |
| Heat Rejection to Atmosphere from Engine | 138 kW | 125 kW |
| Heat Rejection to Atmosphere from Generator | 57.6 kW | 57.6 kW |

| Alternator | |
|--|-----------|
| Motor Starting Capability @ 30% Voltage Dip at 0.4PF | 2980 skVA |
| Current | 2087 Amps |
| Frame size | DSG 74M |
| Excitation | AREP |
| Temperature rise | 125°C |

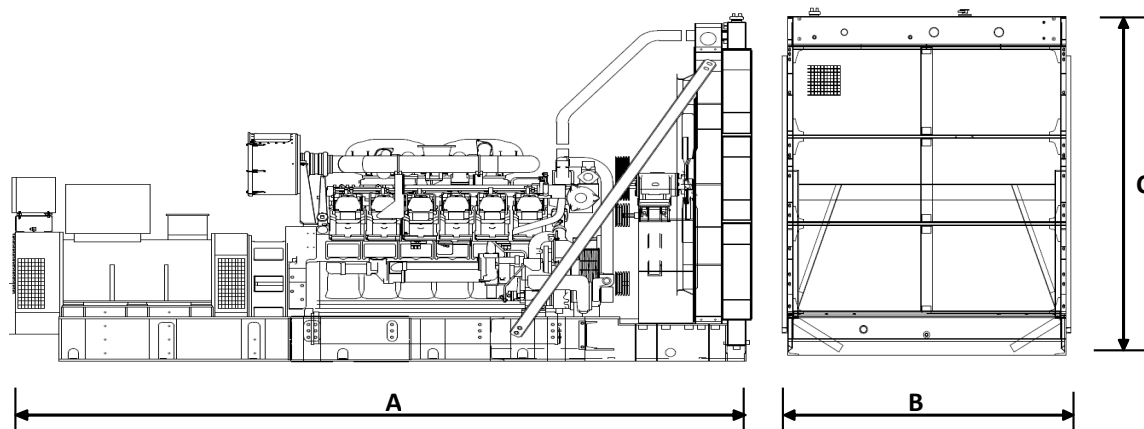
- For ambient and altitude capabilities consult your Cat dealer.
- Air flow restriction (system) is added to existing restriction from factory.
- Generator temperature rise is based on a 40°C (104°F) ambient.

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1200 ekW/ 1500 kVA/ 50 Hz/ 1500 rpm/ 415V/ 0.8 Power Factor

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Fuel Strategy: Low Fuel Consumption



| Dim "A" mm (in) | Dim "B" mm (in) | Dim "C" mm (in) | Dry Weight kg (lb) |
|--------------------|--------------------|--------------------|-----------------------|
| 5500.9(216.57) | 2645 (104.13) | 3183.5 (125.33) | 13250(29220) |

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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