



Image shown may not reflect actual package.

PRIME

**1200 e kW 1500 kVA
50 Hz 1500 rpm 400 Volts**

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

FEATURES

FUEL/EMISSIONS STRATEGY

- Low fuel consumption

DESIGN CRITERIA

- The generator set accepts 100% rated load in one step.

FULL RANGE OF ATTACHMENTS

- Wide range of bolt-on system expansion attachments, factory designed and tested
- Flexible packaging options for easy and cost effective installation

SINGLE-SOURCE SUPPLIER

- Fully prototype tested with certified torsional vibration analysis available

WORLDWIDE PRODUCT SUPPORT

- Caterpillar® dealers provide extensive post sale support including maintenance and repair agreements
- Caterpillar dealers have over 1,600 dealer branch stores operating in 200 countries
- The Cat® S•O•SSM program cost effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by-products

CAT 3512B TA 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

CAT SR5 GENERATOR

- Matched to the performance and output characteristics of Caterpillar engines
- Industry leading mechanical and electrical design
- Industry leading motor starting capabilities
- High Efficiency

CAT CONTROL PANELS

- Simple user friendly interface and navigation
- Scalable system to meet a wide range of customer needs
- Integrated Control System and Communications Gateway

PRIME 1200 kW 1500 kVA

50 Hz 1500 rpm 400 Volts



FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

System	Standard	Optional
Air Inlet	<ul style="list-style-type: none"> • Single element canister type air cleaner 	<ul style="list-style-type: none"> • Dual element & heavy duty air cleaners (with pre-cleaners) • Air inlet adapters & shutoff
Cooling	<ul style="list-style-type: none"> • Radiator with guard (43°C) • Coolant drain line with valve • Fan and belt guards • Caterpillar Extended Life Coolant • Low coolant level & high temperature alarm or shutdown 	<ul style="list-style-type: none"> • Radiator with 50°C ambient capability • Radiator removal • Heat exchanger and expansion tank • Radiator duct flange • Coolant level switch gauge • Jacket water heater
Exhaust	<ul style="list-style-type: none"> • Stainless steel exhaust flex and ANSI outlet flange 	<ul style="list-style-type: none"> • Mufflers (10, 20 & 35 dba)
Fuel	<ul style="list-style-type: none"> • Primary & secondary fuel filters • Fuel priming pump • Flexible fuel lines 	<ul style="list-style-type: none"> • Fuel cooler • Primary fuel filter with fuel water separator
Generator	<ul style="list-style-type: none"> • Class H insulation • Class F temperature (105°C prime/130°C standby) • Reactive droop • CAT digital voltage regulator (CDVR) with KVAR/PF control, 3-phase sensing • Bus bar connections • Winding temperature detectors • Anti-condensation space heaters • Segregated low voltage (AC/DC) wiring panel 	<ul style="list-style-type: none"> • Oversize & premium generators
Power Termination	<ul style="list-style-type: none"> • Bus bar (NEMA and IEC mechanical lug holes)- right side standard • Top and bottom cable entry 	<ul style="list-style-type: none"> • Circuit breakers, UL listed, 3 pole shunt trip, 100% rated, choice of trip units, manual or electrically operated (low voltage only) • Circuit breakers, IEC compliant, 3 or 4 pole with shunt trip (low voltage only), choice of trip units, manual or electrically operated • Shroud cover for bottom cable entry • Power terminations can be located on the left and/or rear as an option. Also, multiple circuit breakers can be ordered (up to 2)
Governor	<ul style="list-style-type: none"> • ADEM™ II 	<ul style="list-style-type: none"> • Low emissions conversion • Load share governor
Control Panels	<ul style="list-style-type: none"> • EMCP II+ 	<ul style="list-style-type: none"> • EMCP II+ with Auto-Paralleling • Switchgear conversion • Customer Communication Module • Local alarm & remote annunciator modules
Lube	<ul style="list-style-type: none"> • Lubricating oil and filter • Oil drain line with valve; piped to edge of base frame • Fumes disposal; piped to front of radiator 	<ul style="list-style-type: none"> • Manual prelube with sump pump • Electric & air prelube pumps • Oil level regulator
Mounting	<ul style="list-style-type: none"> • Rails- engine/generator/radiator mounting • Anti-vibration mounts (shipped loose) • Rubber anti-vibration mounts (shipped loose) 	<ul style="list-style-type: none"> • Isolator removal • Spring-type vibration isolator
Mounting	<ul style="list-style-type: none"> • 330 mm (13 in) structural steel rails • Spring-type, anti-vibration mounts (shipped loose) 	
Starting/Charging	<ul style="list-style-type: none"> • 45 amp charging alternator • Energize to run (ETR) fuel shutoff solenoid • 24 volt starting motor(s) • Battery with rack, cables and disconnect switch 	<ul style="list-style-type: none"> • Battery chargers (5 or 10 Amp) • Oversize batteries • Ether starting aids • Heavy duty starting motors • Barring device (manual)

PRIME 1200 kW 1500 kVA

50 Hz 1500 rpm 400 Volts



SPECIFICATIONS

CAT GENERATOR

Caterpillar Generator	
Frame size.....	824
Excitation.....	Permanent Magnet
Pitch.....	0.6667
Number of poles.....	4
Number of bearings.....	Single Bearing
Number of Leads.....	6
Insulation.....	UL 1446 Recognized Class H with tropicalization and antiabrasion
Alignment.....	Pilot Shaft
Overspeed capability - % of rated.....	180
Wave form.....	003.00
Paralleling kit/Droop transformer.....	Standard
Voltage regulator.3 Phase sensing with selectable volts/Hz	
Voltage regulation.....	Less than +/- 1/2% (steady state) Less than +/- 1% (no load to full load)
Telephone Influence Factor.....	Less than 50
Harmonic distortion.....	Less than 5%

CAT DIESEL ENGINE

3512B TA, 4-stroke-cycle watercooled diesel	
Bore - mm.....	170.00 mm (6.69 in)
Stroke - mm.....	190.00 mm (7.48 in)
Displacement - L.....	51.80 L (3161.03 in ³)
Compression ratio.....	14.0:1
Aspiration.....	TA
Fuel system.....	Electronic unit injection
Governor type.....	Caterpillar ADEM control system

CAT CONTROL PANELS

- EMCP II+
- 24 Volt DC Control
- NEMA 1, IP22 enclosure
- Electronically dead front
- Lockable hinged door
- Generator instruments meet ANSI C-39-1
- Single location customer connection point
- Panel illuminating lights
- Warning / Shutdowns with indicating lights for:
 - Low oil pressure
 - High coolant temperature
 - Overspeed
 - Emergency stop
 - Failure to start (over crank)
 - Low coolant level
 - Auto / start / stop control
- Voltage adjust potentiometer
- True RMS AC metering, 3-phase
- Digital indication for :
 - RPM
 - System DC Volts
 - Operating hours
 - Oil pressure (psi, kPa or bar)
 - Coolant temperature
 - L-L volts, L-N volts, Phase amps, Hz
 - kW, kVA, kVAR, kWhr, %kW, PF(*)
- Programmable protective relaying functions
 - Under and over voltage
 - Under and over frequency
 - Reverse power
 - Overcurrent

Consult your Caterpillar Dealer for Details

PRIME 1200 ekW 1500 kVA

50 Hz 1500 rpm 400 Volts



TECHNICAL DATA

Open Generator Set - - 1500 rpm/50 Hz/400 Volts	DM3062	
Low Fuel Consumption		
Generator Set Package Performance Genset Power rating @ 0.8 pf Genset Power rating with fan	1500 kVA 1200 ekW	
Coolant to aftercooler Coolant to aftercooler temp max	90 ° C	194 ° F
Fuel Consumption 100% load with fan 75% load with fan 50% load with fan	318.1 L/hr 238.8 L/hr 169.7 L/hr	84.0 Gal/hr 63.1 Gal/hr 44.8 Gal/hr
Cooling System¹ Air flow restriction (system) Engine coolant capacity	0.12 kPa 156.8 L	0.48 in. water 41.4 gal
Inlet Air Combustion air inlet flow rate	95.6 m ³ /min	3376.1 cfm
Exhaust System Exhaust stack gas temperature Exhaust gas flow rate Exhaust flange size (internal diameter) Exhaust system backpressure (maximum allowable)	492.3 ° C 258.6 m ³ /min 203.2 mm 6.7 kPa	918.1 ° F 9132.4 cfm 8.0 in 26.9 in. water
Heat Rejection Heat rejection to coolant (total) Heat rejection to exhaust (total) Heat rejection to aftercooler Heat rejection to atmosphere from engine Heat rejection to atmosphere from generator	539 kW 1149 kW 212 kW 138 kW 47.4 kW	30653 Btu/min 65343 Btu/min 12056 Btu/min 7848 Btu/min 2695.6 Btu/min
Alternator² Motor starting capability @ 30% voltage dip Frame Temperature Rise	2626 skVA 824 105 ° C	189 ° F
Emissions (Nominal)³ NOx mg/nm ³ CO mg/nm ³ HC mg/nm ³ PM mg/nm ³	3556.4 mg/nm ³ 594.4 mg/nm ³ 70.8 mg/nm ³ 25.3 mg/nm ³	

¹ For ambient and altitude capabilities consult your Caterpillar dealer. Air flow restriction (system) is added to existing restriction from factory.

² Generator temperature rise is based on a 40° C (104° F) ambient per NEMA MG1-32.

³ Emissions data measurement procedures are consistent with those described in EPA CFR 40 Part 89, Subpart D & E and ISO8178-1 for measuring HC, CO, PM, NOx. Data shown is based on steady state operating conditions of 77°F, 28.42 in HG and number 2 diesel fuel with 35° API and LHV of 18,390 btu/lb. The nominal emissions data shown is subject to instrumentation, measurement, facility and engine to engine variations. Emissions data is based on 100% load and thus cannot be used to compare to EPA regulations which use values based on a weighted cycle.

PRIME 1200 ekW 1500 kVA

50 Hz 1500 rpm 400 Volts



RATING DEFINITIONS AND CONDITIONS

Meets or Exceeds International Specifications: AS1359, CSA, IEC60034-1, ISO3046, ISO8528, NEMA MG 1-22, NEMA MG 1-33, UL508A, 72/23/EEC, 98/37/EC, 2004/108/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 Caterpillar representative for details. For information regarding Low Sulfur fuel and Biodiesel capability, please consult your Caterpillar dealer.

PRIME 1200 ekW 1500 kVA

50 Hz 1500 rpm 400 Volts



DIMENSIONS

Package Dimensions		
Length	5689.9 mm	224.01 in
Width	2150.5 mm	84.67 in
Height	2230.3 mm	87.81 in
Weight	15 082 kg	33,250 lb

NOTE: For reference only - do not use for installation design. Please contact your local dealer for exact weight and dimensions. (General Dimension Drawing #1558403).

Performance No.: DM3062

Feature Code: 512DE07

Gen. Arr. Number: 1662704

Source: European Sourced

February 09 2009

14161362

www.CAT-ElectricPower.com

© 2009 Caterpillar
All rights reserved.

Materials and specifications are subject to change without notice.
The International System of Units (SI) is used in this publication.

CAT, CATERPILLAR, SAFETY.CAT.COM their respective logos, "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.