



Image shown may not reflect actual package.

STANDBY

720 e kW 900 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

FULL RANGE OF ATTACHMENTS

- Wide range of bolt-on system expansion attachments, factory designed and tested

ENCLOSURES (optional)

- Weather protective and sound attenuated

SINGLE-SOURCE SUPPLIER

- Factory-designed systems built at Caterpillar ISO 9001:2000 certified facilities
- 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 fill 99.7% of parts orders within 24 hours
- Caterpillar dealers have over 1,798 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® 3412C 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 SR4B GENERATOR

- Matched to the performance and output characteristics of Caterpillar engines
- Optimum winding pitch for minimum total harmonic distortion and maximum efficiency
- Segregated low voltage, AC/DC accessory box provides single point access to accessory connections
- UL 1446 Recognized Class H insulation

CAT CONTROL PANELS

- Four levels of controls to meet individual customer needs:
 - EMCP II offers digital monitoring, metering, and protection
 - EMCP II+ offers EMCP II features plus full-featured power metering and protective relaying
 - EMCP II+ Auto-Paralleling offers EMCP II+ features plus synchronization and load sharing
 - Switchgear conversion offers easy interface for remote switchgear
- UL 508A Listed

STANDBY 720 ekW 900 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 •Service indicator 	<ul style="list-style-type: none"> •Dual element air cleaner •Heavy-duty air cleaner
Cooling	<ul style="list-style-type: none"> • Radiator with guard • Coolant drain line with valve • Fan and belt guards • Caterpillar® Extended Life Coolant • Low coolant level alarm or shutdown 	<ul style="list-style-type: none"> • Radiator duct flange • Jacket water heater with shutoff valve • Heat exchanger and expansion tank
Exhaust	<ul style="list-style-type: none"> • Stainless steel exhaust flex and ANSI outlet flange 	<ul style="list-style-type: none"> • Mufflers (20, 25, or 30 dBA) • Elbow kit and through-wall installation kit • Manifold and turbocharger guards • All mufflers have side/end inlet options
Fuel	<ul style="list-style-type: none"> • Primary and secondary fuel filters • Water separator • Fuel priming pump • Flexible fuel lines • Fuel pressure gauge 	<ul style="list-style-type: none"> • Manual transfer pump • Choice of three Automatic Transfer Systems • Low fuel level alarm
Governor	<ul style="list-style-type: none"> • PEEC - Cat Electronic 	<ul style="list-style-type: none"> • Electronic isochronous • Electronic load sharing
Control Panels	<ul style="list-style-type: none"> • EMCP II • Voltage adjustment potentiometer • Auto start/stop control switch • Emergency stop pushbutton • Panel lights • Digital AC meter - 3 phase True RMS • Digital Indicators • Safety Shutdown protection with LED Lights 	<ul style="list-style-type: none"> • EMCP II+ • Switchgear conversion • Customer Communication Module • Local alarm and remote annunciator modules
Lube	<ul style="list-style-type: none"> • Lubricating oil and filter • Oil drain line with valves • Fumes disposal 	<ul style="list-style-type: none"> • Manual sump pump
Mounting	<ul style="list-style-type: none"> • Formed steel base • Linear vibration isolators between base and engine-generator 	<ul style="list-style-type: none"> • Integral fuel tank base • Sub base fuel tank • Wide base • Skid base
Starting/Charging	<ul style="list-style-type: none"> • 45 amp charging alternator • Energized to run (ETR) fuel shutoff solenoid • 24 volt starting motor • Batteries with rack and cables • Battery disconnect switch 	<ul style="list-style-type: none"> • Heavy-duty starting system • 5 or 10 amp battery charger • Oversize batteries • Ether starting aid
General		<ul style="list-style-type: none"> • Enclosures - sound attenuated, weather protective • Automatic transfer switches (ATS) • Floor standing circuit breakers • CSA Certification
Note	Standard and optional equipment may vary for UL 2200 Listed packages. UL 2200 Listed packages may have oversized generators with a different temperature rise and motor starting characteristics.	

STANDBY 720 ekW 900 kVA

50 Hz 1500 rpm 400 Volts



SPECIFICATIONS

CAT SR4B GENERATOR

Frame Size.....598
Excitation.....Self Excited
Pitch.....0.8667
Number of poles.....4
Number of bearings..... Single Bearing
Insulation..... UL 1446 Recognized Class H with tropicalization and antiabrasion
IP Rating.....Drip Proof IP22
Alignment..... Pilot Shaft
Overspeed capability - % of rated..... 180
Wave form..... Less than 5% deviation
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

3412C TA V-12, 4-stroke-cycle watercooled diesel
Bore - mm..... 137.20 mm (5.4 in)
Stroke - mm..... 152.40 mm (6.0 in)
Displacement - L..... 27.02 L (1648.86 in³)
Compression Ratio..... 13.0:1
Aspiration..... TA
Fuel system..... Pump and Lines
Governor type..... PEEC - Cat Electronic

CAT CONTROL PANELS

- EMCP II
- 24 Volt CD 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
- Auto start/stop control
- Voltage adjust potentiometer
- True RMS AC metering
- Digital indications for:
 - RPM
 - Operating hours
 - Oil pressure
 - Coolant Temperature
 - System DC volts
 - AC volts, phase amps, Hz
- Shutdowns with indicating lights for:
 - Low oil pressure
 - High coolant temperature
 - Overspeed
 - Emergency Stop
 - Failure to start (overcrank)

STANDBY 720 ekW 900 kVA

50 Hz 1500 rpm 400 Volts



TECHNICAL DATA

Open Generator Set - - 1500 rpm/50 Hz/400 Volts	DM1909
Package Performance Genset Power rating @ 0.8 pf Genset Power rating with fan	900 kVA 720 ekW
Fuel Consumption 100% load with fan 75% load with fan 50% load with fan	191.7 L/hr 143.7 L/hr 99.6 L/hr
Cooling System¹ Ambient air temperature Air flow restriction (system) Air flow (max @ rated speed for radiator arrangement) Engine coolant capacity Radiator coolant capacity Engine Coolant capacity with radiator/exp. tank	50 ° C 0.12 kPa 1176 m ³ /min 59.0 L 90.0 L 149.0 L
Exhaust System Combustion air inlet flow rate Exhaust stack gas temperature Exhaust gas flow rate Exhaust flange size (internal diameter) Exhaust system backpressure (maximum allowable)	54.7 m ³ /min 544.9 ° C 157.3 m ³ /min 203.2 mm 6.7 kPa
Heat rejection Heat rejection to coolant (total) Heat rejection to exhaust (total) Heat rejection to atmosphere from engine Heat rejection to atmosphere from generator	429 kW 721 kW 119 kW 33.9 kW
Alternator² Motor starting capability @ 30% voltage dip Frame Temperature Rise	1629 skVA 598 130 ° C
Lube System Sump refill with filter	139.0 L
Emissions³ NOx mg/nm3 CO mg/nm3 HC mg/nm3 PM mg/nm3	2954.8 mg/nm ³ 454.4 mg/nm ³ 143.1 mg/nm ³ 64.8 mg/nm ³

¹ Ambient capability at 200 m (660 ft) above sea level. For ambient capability at other altitudes, consult your Caterpillar dealer.

² UL 2200 Listed packages may have oversized generators with a different temperature rise and motor starting characteristics. Generator temperature rise is based on a 40 degree C ambient per NEMA MG1-32.

³ Emissions data measurement is consistent with those described in EPA CFR40 Part 89, Subpart D 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.

STANDBY 720 ekW 900 kVA

50 Hz 1500 rpm 400 Volts



RATING DEFINITIONS AND CONDITIONS

Meets or Exceeds International Specifications: ABGSM TM3, AS1359, AS2789, BS4999, BS5000, BS5514, DIN6271, DIN6280, EGSA101P, IEC34/1, ISO3046/1, ISO8528, JEM1359, NEMA MG 1-22, VDE0530, 89/392/EEC, 89/336/EEC

Standby - Output available with varying load for the duration of the interruption of the normal source power. Standby power in accordance with ISO8528. Fuel stop power in accordance with ISO3046/1, AS2789, DIN6271, and BS5514. Standby ambients shown indicate ambient temperature at 100 percent load which results in a coolant top tank temperature just below the shutdown temperature.

Ratings are based on SAE J1995 standard conditions. These ratings also apply at ISO3046/1, DIN6271, and BS5514 standard conditions.

Fuel Rates are based on fuel oil of 35° API (16° C or 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. Consult your Caterpillar representative for details.

STANDBY 720 ekW 900 kVA

50 Hz 1500 rpm 400 Volts



DIMENSIONS

Package Dimensions	
Length	4485.0 mm
Width	1741.6 mm
Height	1986.7 mm
Weight	7103 kg

Note: Do not use for installation design.
See general dimension drawings for detail (Drawing #2905816).

Performance No.: DM1909

Feature Code:: 412DER1

Source:: U.S. Sourced

6 June 2006

6869089

www.CAT-ElectricPower.com

© 2006 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, their respective logos and "Caterpillar Yellow," as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.