



Image shown may not reflect actual package.

STANDBY

600 e kW 750 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

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® 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

- Designed to match the performance and output characteristics of Caterpillar diesel engines
- Single point access to accessory connections
- UL 1446 recognized Class H insulation

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

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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 and duct flange • 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"> • Jacket water heater with shutoff valves • Heat exchanger and expansion tank
Exhaust	<ul style="list-style-type: none"> • Stainless steel exhaust flex with ANSI style outlet flange, gasket, bolts and mating weld flange, shipped loose 	<ul style="list-style-type: none"> • Mufflers (20, 25 or 30 dBA) • Elbow kit and through-wall installation kit • Manifold and turbocharger guards
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
Generator	<ul style="list-style-type: none"> • Class H insulation • Class F temperature rise (105°C prime/130°C standby) • VR6 Voltage Regulator, 3-phase sensing, 2:1 Volts/Hz • Reactive droop • Power terminal strip termination • Extension box • Segregated low voltage (AC/DC) wiring panel 	<ul style="list-style-type: none"> • Digital Voltage Regulator with KVAR/PF control • Anti-condensation space heater • Oversize and premium generators • Circuit breakers, UL Listed, 3-pole with shunt trip • Circuit breakers, IEC Compliant, 3-pole or 4-pole with shunt trip • Multiple breaker capability
Governor	<ul style="list-style-type: none"> • PEEC - Cat Electronic 	<ul style="list-style-type: none"> • 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"> • 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.	

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SPECIFICATIONS

CAT SR4B GENERATOR

Frame Size.....596
Excitation..... Permanent Magnet
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+
- Auto start / stop control switch
- Voltage adjustment potentiometer
- Panel illuminating lights
- Digital AC metering - 3 phase, true RMS
- Digital indications for:
 - RPM
 - System DC volts
 - Operating hours
 - Oil pressure
 - Coolant temperature
 - System diagnostic codes
 - Coolant Temperature
 - kW, kVa, kVAR, kW-hr, % kW, PF
- Shutdowns with indicating lights for:
 - Low oil pressure
 - High coolant temperature
 - Overspeed
 - Emergency Stop
 - Failure to start (overcrank)
 - Low coolant level
- Programmable protective relay functions:
 - Under and over voltage
 - Under and over frequency
 - Reverse power
 - Overcurrent and kW level
- 3 spare LEDs and 4 spare inputs

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TECHNICAL DATA

Open Generator Set - - 1500 rpm/50 Hz/400 Volts	DM0629	
Package Performance Genset Power rating @ 0.8 pf Genset Power rating with fan	750 kVA 600 ekW	
Fuel Consumption 100% load with fan 75% load with fan 50% load with fan	158.9 L/hr 121.6 L/hr 85.3 L/hr	42.0 Gal/hr 32.1 Gal/hr 22.5 Gal/hr
Cooling System¹ Air flow restriction (system) Air flow (max @ rated speed for radiator arrangement) Engine coolant capacity	0.12 kPa 1236 m ³ /min 59.0 L	0.48 in. water 43649 cfm 15.6 gal
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)	45.6 m ³ /min 536.0 ° C 129.8 m ³ /min 203.2 mm 6.7 kPa	1610.4 cfm 996.8 ° F 4583.8 cfm 8.0 in 26.9 in. water
Heat rejection Heat rejection to coolant (total) Heat rejection to exhaust (total) Heat rejection to atmosphere from engine Heat rejection to atmosphere from generator	359 kW 591 kW 96 kW 28.9 kW	20416 Btu/min 33610 Btu/min 5460 Btu/min 1643.5 Btu/min
Alternator² Motor starting capability @ 30% voltage dip Frame Temperature Rise	1732 skVA 596 130 ° C	234 ° F
Lube System Sump refill with filter	139.0 L	36.7 gal
Emissions³ NOx mg/nm ³ CO mg/nm ³ HC mg/nm ³ PM mg/nm ³	2947.9 mg/nm ³ 170.2 mg/nm ³ 109.5 mg/nm ³ 45.1 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 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°C 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.

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RATING DEFINITIONS AND CONDITIONS

Meets or Exceeds International Specifications: AS1359, CSA, IEC60034, ISO3046, ISO8528, NEMA MG 1-33, UL508A, 98/37/EC

Standby - Output available with varying load for the duration of the interruption of the normal source power. Average power output is 70% of the standby power rating. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year. Standby power in accordance with ISO8528. Fuel stop power in accordance with ISO3046. Standby ambients shown indicate ambient temperature at 100% 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 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.

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DIMENSIONS

Package Dimensions		
Length	4514.3 mm	177.73 in
Width	1827.4 mm	71.94 in
Height	1990.3 mm	78.36 in
Weight	6700 kg	14,771 lb

NOTE: For reference only - do not use for installation design. Please contact your local dealer for exact weight and dimensions. (General Dimension Drawing #1863619).

Performance No.: DM0629

Feature Code: 412DE7H

Gen. Arr. Number: 1366598

Source: U.S. Sourced

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