# CATERPILLAR®



### **FEATURES**

#### **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

- Worldwide parts availability through the Caterpillar dealer network
- With over 1,200 dealer outlets operating in 166 countries, you're never far from the Caterpillar part you need.
- 99.5% of parts orders filled within 48 hours. The best product support record in the industry.
- Caterpillar dealer service technicians are trained to service every aspect of your electric power generation system.
- Preventive maintenance agreements
- The Cat Scheduled Oil Sampling (S•O•S<sup>™</sup>) program cost effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by-products

## CONTINUOUS 200 kVA

### 50 Hz

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



### CAT<sup>®</sup> G3406 TA GAS ENGINE

- Reliable, rugged, durable design
- Field-proven in thousands of applications worldwide
- Low pressure gas

### CAT SR4B GENERATOR

- Designed to match performance and output characteristics of Caterpillar engines
- Optimum winding pitch for minimum total harmonic distortion and maximum efficiency
- Segregated AC/DC, low voltage accessory box provides single point access to accessory connections

### **CAT CONTROL PANELS**

 Two levels of controls, designed to meet individual customer needs: EMCP II provides digital monitoring, metering, and protection

EMCP II+ provides EMCP II features along with full-featured power metering and protective relaying

LEHE1427-01



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### **FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT**

System	Standard	Optional	
Air Inlet	Single element canister type air cleaner Service indicator		
Cooling	Radiator with guard Coolant drain lines with valves Fan and belt guards Caterpillar Coolant Low coolant level sensors	Jacket water coolant heater with shutoff valves Radiator removal	
Exhaust	Stainless steel exhaust flex with weld outlet flange	15 dBA muffler	
Fuel	Gas pressure regulator Low pressure fuel system Energize To Run (ETR) gas shutoff valve		
Generator	Self excited Class H insulation Class F temperature rise (105° C continuous/130° C standby) VR6 Voltage Regulator, 3-phase sensing, with reactive droop 2:1 Volts/Hz or 1:1 Volts/Hz Bus bar termination Extension box	Permanent magnet excited Digital Voltage Regulator Digital Voltage Regulator with KVAR/PF control Anti-condensation space heater Oversize & premium generators Circuit breakers, UL, 3 pole with shunt trip Multiple breaker capability	
Governor	Flo-Tech actuator and speed control	Electronic load sharing	
Ignition	Digital ignition system		
Control Panels	EMCP II	EMCP II+ Customer Communication Module Local alarm & remote annunciator modules	
Lube	Lubricating oil and filter Oil drain line with valve Fumes disposal	Manual sump pump	
Mounting	Narrow base Linear vibration isolators between base and engine-generator		
Starting/Charging	35 amp charging alternator 24 volt starting motor Batteries with rack and cables Battery disconnect switch	Battery chargers, 5 & 10 amp Oversize batteries	
General		Automatic Transfer Switches (ATS) Floor standing circuit breakers	

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SPECIFICATIONS				
CAT SR4B GENERATOR				
Frame				
Type Self excited, static regulated, brushless   Construction Single bearing, close coupled   Three phase 12 lead reconnectable				
Insulation Class H with tropicalization and antiabrasion				
IP rating Drip proof 22				
AlignmentPilot shaft				
Overspeed capability Prototype tested				
Wave form Less than 5% deviation				
Paralleling capability Standard				
Voltage regulator 3-phasing sensing with Volts-per-Hertz Voltage regulation Less than ± 1/2% (steady state) Less than ± 1% (no load to full load)				
Voltage gain Automatic				
Telephone Influence Factor (TIF)Less than 50   Harmonic Distortion (THD)				



### CAT ENGINE

G3406 TA, 4-stroke-cycle	
Bore – mm (in)	
Stroke – mm (in)	
Displacement – L (cu in)	
Compression ratio	10.3:1
Aspiration Turb	ocharged-Aftercooled
Ignition system	Digital ignition
Governor type	Woodward Flo-Tech



24 Volt DC Control NEMA 1, IP22 enclosure Electrically dead front Lockable hinged door Generator instruments meet ANSI C-39-1 Terminal box mounted Single location customer connector point

Consult your Caterpillar dealer for available voltages.

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### **TECHNICAL DATA**

Open Generator Set — 1500 rpm/50 Hz/400 Volts		Continuous DM5448
Package Performance Power rating @ 0.8 PF Power rating Aftercooler temperature	kVA ekW Deg C	200 160 54
Fuel Consumption 100% load with fan 75% load with fan 50% load with fan	N•m³/hr N•m³/hr N•m³/hr	52 41 30
Cooling System Ambient air temperature* Air flow restriction (system) Air flow (maximum @ rated speed for standard radiator arrangement) Engine coolant capacity with radiator Jacket water outlet temperature	Deg C kPa m³/min L Deg C	40 0.12 662 57 99
Exhaust System Combustion air inlet flow rate Exhaust gas stack temperature Exhaust gas flow rate Exhaust flange size (internal diameter) Exhaust system backpressure (maximum allowable)	N•m³/min Deg C N•m³/min mm kPa	10 488 11 127 6.7
Heat Rejection Low Heat Value (LHV) fuel input Heat rejection to jacket water (includes oil cooler) Total heat rejection to exhaust (LHV to 25° C) Heat rejection to exhaust (LHV to 120° C) Heat rejection to A/C Heat rejection to atmosphere from engine Heat rejection to atmosphere from generator	kW kW kW kW kW kW kW	524 174 134 97 6 21 13
Generator Motor starting capability @ 30% voltage dip** Frame Temperature rise	kVA Deg C	506 447 105
© Emissions*** NOx CO HC (total) HC (non-methane) Exhaust O <sub>2</sub> (dry)	mg/N•m³ @ 5% O <sub>2</sub> mg/N•m³ @ 5% O <sub>2</sub> mg/N•m³ @ 5% O <sub>2</sub> mg/N•m³ @ 5% O <sub>2</sub> %	8167 532 2036 306 4.0

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

\*\*Assumes synchronous driver

\*\*\*Emissions data measurement is consistent with those described in EPA CFR 40 PART 89 SUBPART D and ISO 8178-1 for measuring HC, CO, CO<sub>2</sub> and NOx. Data shown is based on steady state engine operating conditions of 77° F, 28.43 inches HG and fuel having a LHV of 920 BTU per cubic foot at 30.00 inches HG absolute and 32° F. Not to exceed emission data shown is subject to instrumentation, measurement, facility and engine fuel system adjustments.

### **RATING DEFINITIONS AND CONDITIONS**

**Continuous** — Output available without varying load for an unlimited time.

**Ratings** are based on ISO3046/1 standard reference conditions of  $25^{\circ}$  C (77° F) and 100 kPa (29.61 in Hg).

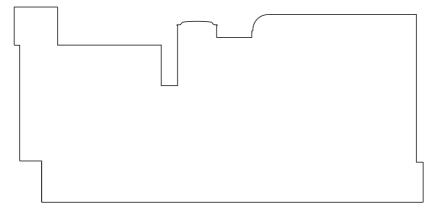
**Ratings** are based on pipeline natural gas having a LHV (low heat value) of 36.2 mJ/N•m<sup>3</sup> (920 Btu/cu ft). Variations in altitude, temperature, and gas composition from standard conditions or the use of a three way catalyst may require a reduction in engine horsepower.



### CONTINUOUS POWER GENERATOR SET PACKAGE - TOP VIEW



### CONTINUOUS POWER GENERATOR SET PACKAGE — SIDE VIEW



Package Dimensions				
Length	4074 mm	160.39 in		
Width	1398.4 mm	55.05 in		
Height	2138.6 mm	84.20 in		
Shipping Weight	4318 kg	9500 lb		

Note: Do not use for installation design. See general dimension drawings for detail (Drawing #205-4501).

TMI Reference No.: DM5448 U.S. sourced LEHE1427-01 (03-02) www.CAT-ElectricPower.com

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