



## STANDBY 240 ekW CONTINUOUS 190 ekW

60 Hz

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

#### 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>SM</sup>) program cost effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by-products



#### CAT® 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

**FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT**

System	Standard	Optional
<b>Air Inlet</b>	Single element canister type air cleaner Service indicator	
<b>Cooling</b>	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
<b>Exhaust</b>	Stainless steel exhaust flex with weld outlet flange	15 dBA muffler
<b>Fuel</b>	Gas pressure regulator Low pressure fuel system Energize To Run (ETR) gas shutoff valve	
<b>Generator</b>	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
<b>Governor</b>	Flo-Tech 68 speed control	Electronic load sharing
<b>Ignition</b>	Digital ignition system	
<b>Control Panels</b>	EMCP II	EMCP II+ Customer Communication Module Local alarm & remote annunciator modules
<b>Lube</b>	Lubricating oil and filter Oil drain line with valve Fumes disposal	Manual sump pump
<b>Mounting</b>	Narrow base Linear vibration isolators between base and engine-generator	
<b>Starting/Charging</b>	35 amp charging alternator 24 volt starting motor Batteries with rack and cables Battery disconnect switch	Battery chargers, 5 & 10 amp Oversize batteries
<b>General</b>		Automatic Transfer Switches (ATS) Floor standing circuit breakers

**SPECIFICATIONS**



**CAT SR4B GENERATOR**

Frame.....	447
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
Alignment.....	Pilot shaft
Overspeed capability	
Prototype tested .....	150%
Production tested .....	125%
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) .....	Less than 5%



**CAT ENGINE**

G3406 TA, 4-stroke-cycle	
Bore – mm (in) .....	137 (5.4)
Stroke – mm (in) .....	164 (6.5)
Displacement – L (cu in) .....	14.6 (891)
Compression ratio .....	10.3:1
Aspiration .....	Turbocharged-Aftercooled
Ignition system .....	Digital ignition
Governor type .....	Woodward Flo-Tech



**CAT CONTROL PANEL**

<b>24 Volt DC Control</b>
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.**

**TECHNICAL DATA**

Open Generator Set — 1800 rpm/60 Hz/480 Volts			Standby DM5439		Continuous DM5440	
<b>Package Performance</b>						
Power rating		ekW	240		190	
Power rating @ 0.8 PF		kVA	300		238	
Aftercooler temperature	Deg C	Deg F	54	130	54	130
<b>Fuel Consumption</b>						
100% load with fan	N•m³/hr	scf/hr	77	2894	64	2398
75% load with fan	N•m³/hr	scf/hr	61	2291	51	1912
50% load with fan	N•m³/hr	scf/hr	45	1682	37	1418
<b>Cooling System</b>						
Ambient air temperature*	Deg C	Deg F	40	105	40	105
Air flow restriction (system)	kPa	in water	0.12	0.5	0.12	0.5
Air flow (maximum @ rated speed for standard radiator arrangement)	m³/min	cfm	679	23,983	836	29,524
Engine coolant capacity with radiator	L	Gal	57	15	57	15
Jacket water outlet temperature	Deg C	Deg F	99	210	99	210
<b>Exhaust System</b>						
Combustion air inlet flow rate	N•m³/min	scfm	16	572	12	466
Exhaust gas stack temperature	Deg C	Deg F	536	997	525	977
Exhaust gas flow rate	N•m³/min	cfm	16	1749	13	1424
Exhaust flange size (internal diameter)	mm	in	127	5	127	5
Exhaust system backpressure (maximum allowable)	kPa	in water	6.7	27	6.7	27
<b>Heat Rejection</b>						
Low Heat Value (LHV) fuel input	kW	Btu/min	780	44,358	647	36,767
Heat rejection to jacket water (includes oil cooler)	kW	Btu/min	234	13,305	210	11,946
Total heat rejection to exhaust (LHV to 25° C)	kW	Btu/min	217	12,319	174	9892
Heat rejection to exhaust (LHV to 120° C)	kW	Btu/min	167	8180	132	6460
Heat rejection to A/C	kW	Btu/min	25	1395	12	694
Heat rejection to atmosphere from engine	kW	Btu/min	31	1774	26	1471
Heat rejection to atmosphere from generator	kW	Btu/min	20	1162	16	897
<b>Generator</b>						
Motor starting capability @ 30% voltage dip**		kVA	649		649	
Frame			447		447	
Temperature rise		Deg C	130		105	
<b>Emissions***</b>						
NOx		g/bhp-hr	17.8		19.7	
CO		g/bhp-hr	1.1		1	
HC (total)		g/bhp-hr	3.9		4.2	
HC (non-methane)		g/bhp-hr	0.59		0.63	
Exhaust O <sub>2</sub> (dry)		%	4.0		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**

**Standby** — Output available with varying load for the duration of the interruption of the normal source power.

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

**Ratings** are based on ISO3046/1 standard reference conditions of 25° 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.

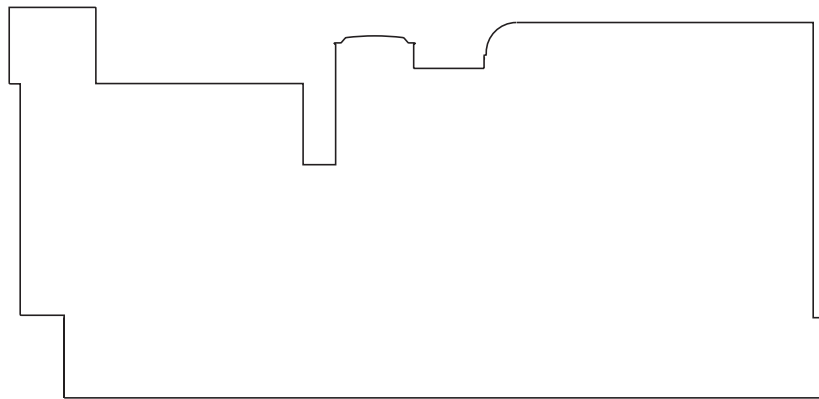
**S T A N D B Y**            **2 4 0** e k W  
**C O N T I N U O U S**    **1 9 0** e k W  
**6 0** H z



**STANDBY/CONTINUOUS POWER GENERATOR SET PACKAGE — TOP VIEW**



**STANDBY/CONTINUOUS POWER GENERATOR SET PACKAGE — SIDE VIEW**



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

Note: Do not use for installation design.  
See general dimension drawings  
for detail (Drawing #207-4501).

[www.CAT-ElectricPower.com](http://www.CAT-ElectricPower.com)

TMI Reference No.: DM5439, DM5440

U.S. sourced

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The International System of Units (SI) is used in this publication.