



## STANDBY 450 kW CONTINUOUS 375 kW

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® G3412 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





**TECHNICAL DATA**

Open Generator Set — 1800 rpm/60 Hz/480 Volts			Standby DM5445		Continuous DM5446	
<b>Package Performance</b>						
Power rating		ekW	450		375	
Power rating @ 0.8 PF		kVA	563		469	
Aftercooler temperature	Deg C	Deg F	54	130	54	130
<b>Fuel Consumption</b>						
100% load with fan	N•m³/hr	scf/hr	148	5507	120	4472
75% load with fan	N•m³/hr	scf/hr	116	4360	96	3576
50% load with fan	N•m³/hr	scf/hr	86	3200	72	2702
<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	1430	50,491	1430	50,491
Engine coolant capacity with radiator	L	Gal	140	37	140	37
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	29	1062	24	872
Exhaust gas stack temperature	Deg C	Deg F	502	936	478	892
Exhaust gas flow rate	N•m³/min	cfm	30	3124	25	2476
Exhaust flange size (internal diameter)	mm	in	203	8	203	8
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	1484	84,410	1205	68,547
Heat rejection to jacket water (includes oil cooler)	kW	Btu/min	514	29,213	437	24,869
Total heat rejection to exhaust (LHV to 25° C)	kW	Btu/min	359	20,431	283	16,067
Heat rejection to exhaust (LHV to 120° C)	kW	Btu/min	284	13,741	218	10,412
Heat rejection to A/C	kW	Btu/min	37	2127	15	866
Heat rejection to atmosphere from engine	kW	Btu/min	59	3376	48	2742
Heat rejection to atmosphere from generator	kW	Btu/min	29	1660	29	1660
<b>Generator</b>						
Motor starting capability @ 30% voltage dip**		kVA	928		928	
Frame			592		592	
Temperature rise		Deg C	130		105	
<b>Emissions***</b>						
NOx		g/bhp-hr	21.7		21.3	
CO		g/bhp-hr	1.5		1.5	
HC (total)		g/bhp-hr	1.4		1.9	
HC (non-methane)		g/bhp-hr	0.21		0.29	
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.

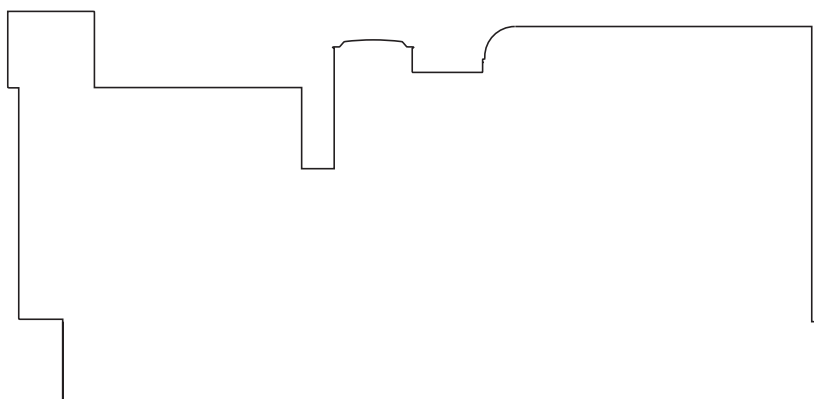
**S T A N D B Y**      4 5 0   e k W  
**C O N T I N U O U S**   3 7 5   e k W  
**6 0 H z**



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



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



Package Dimensions		
<b>Length</b>	4543.1 mm	178.86 in
<b>Width</b>	2235.8 mm	88.02 in
<b>Height</b>	2685.5 mm	105.73 in
<b>Shipping Weight</b>	6356 kg	14,000 lb

Note: Do not use for installation design.  
See general dimension drawings  
for detail (Drawing #207-4502).

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

TMI Reference No.: DM5445, DM5446

U.S. sourced

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