

# Cat® G3412C

## Gas Generator Sets



Image shown may not reflect actual configuration

Bore – mm (in)	137 (5.4)
Stroke – mm (in)	152 (6.0)
Displacement – L (in <sup>3</sup> )	27.0 (1649)
Compression Ratio	11.4:1
Aspiration	TA
Fuel System	LPG IMPCO with Altronics Air Fuel Ratio Control – NOx Feedback
Governor Type	ADEM™ A4

Standby 60 Hz ekW (kVA)	Emissions Performance
500 (625)	U.S. EPA Stationary Emergency Compliant Capable

### Standard Features

#### Cat® Engine

- Robust high speed block design provides prolonged life and lower owning and operating costs
- Designed for maximum performance on low pressure gaseous fuel supply
- Simple open chamber combustion system for reliability and fuel flexibility

#### Generator Set Package

- Accepts 100% block load in one step
- Conforms to ISO 8528-5 G2 load acceptance criteria
- Reliability verified through torsional vibration, fuel consumption, oil consumption, transient performance, and endurance testing

#### Generators

- Superior motor starting capability minimizes need for oversizing generator
- Designed to match performance and output characteristics of Cat engines

#### Cooling System

- Cooling systems available to operate in ambient temperatures up to 37°C (98°F)
- Higher ambient cooling systems available upon request

#### EMCP 4 Control Panels

- User-friendly interface and navigation
- Scalable system to meet a wide range of installation requirements
- Expansion modules and site specific programming for specific customer requirements

#### Warranty

- 24 months/1000-hour warranty for standby ratings
- 12 months/unlimited hour warranty for continuous ratings
- Extended service protection is available to provide extended coverage options

#### Worldwide Product Support

- Cat dealers have over 1,800 dealer branch stores operating in 200 countries
- Your local Cat dealer provides extensive post-sale support, including maintenance and repair agreements

#### Financing

- Caterpillar offers an array of financial products to help you succeed through financial service excellence
- Options include loans, finance lease, operating lease, working capital, and revolving line of credit
- Contact your local Cat dealer for availability in your region

## Optional Equipment

### Engine

#### **Air Cleaner (Single Element)**

- Installed
- Supplied loose

#### **Muffler**

- Industrial grade (15 dB)
- Residential grade (18 dB)
- Critical grade (25 dB)
- Spark arresting

#### **Starting**

- Standard batteries
- Standard electric starter(s)
- Air starter(s)
- Jacket water heater

### Generators

#### **Output voltage**

- 208V     2400V
- 220V     4160V
- 240V     12470V
- 380V     13200V
- 440V     13800V
- 480V
- 600V

#### **Temperature Rise (over 40°C ambient)**

- 150°C
- 125°C/130°C
- 105°C
- 80°C

#### **Winding type**

- Random wound
- Form wound

#### **Excitation**

- Permanent magnet (PM)

#### **Attachments**

- Anti-condensation heater
- Stator and bearing temperature monitoring and protection

### Power Termination

#### **Type**

- Bus bar
- Circuit breaker
- 400A     800A
- 1200A     1600A
- 2000A     2500A
- 3200A     4000A
- UL     IEC
- 3-pole     4-pole
- Manually operated
- Electrically operated

#### **Trip Unit**

- LSI     LSI-G
- LSIG-P

### Enclosure

- Weather protective
- Sound attenuated

#### **Attachments**

- Cold weather bundle
- DC lighting package
- AC lighting package
- Motorized louvers

### Fuel System Pressure

- Standard
- Low

### Control System

#### **Controller**

- EMCP 4.2
- EMCP 4.3
- EMCP 4.4

#### **Attachments**

- Local annunciator module
- Remote annunciator module
- Load share module
- Remote monitoring software

### Charging

- Battery charger – 5A
- Battery charger – 10A
- Battery charger – 20A
- Battery charger – 35A
- Battery charger – 50A

### Vibration Isolators

- Rubber
- Spring
- Seismic rated

### Cat Connect

#### **Connectivity**

- Ethernet

### Extended Service Options

#### **Terms**

- 2 year
- 3 year
- 5 year
- 10 year

#### **Coverage**

- Silver
- Gold
- Platinum
- Platinum Plus

### Ancillary Equipment

- Automatic transfer switch (ATS)
- Uninterruptible power supply (UPS)
- Paralleling switchgear
- Paralleling controls

### Certifications

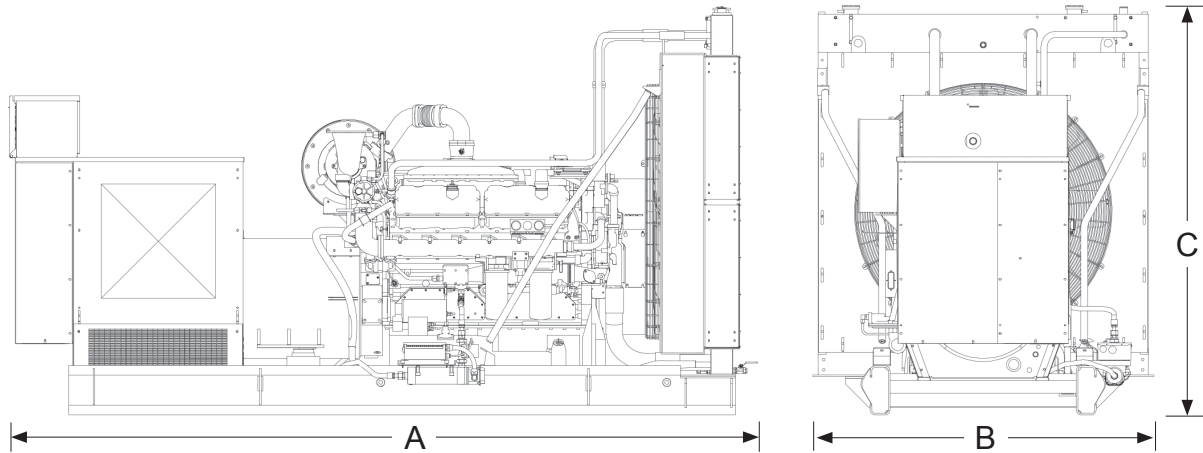
- UL 2200 Listed
- CSA Certified
- EU Declaration of Conformity
- EEC Declaration of Conformity

**Note:** Some options may not be available on all models. Certifications may not be available with all model configurations. Consult factory for availability.

## Package Performance

Performance	Standby	
Frequency	60 Hz	
Genset power rating @ 0.8 power factor – ekW (kVA)	500	(625)
Emissions	U.S. EPA Stationary Emergency Compliant Capable	
Performance number	EM1888-02	
Fuel Consumption		
100% load with fan – MJ/ekW-hr (Btu/ekW-hr)	11.28	(10694)
75% load with fan – MJ/ekW-hr (Btu/ekW-hr)	11.90	(11285)
50% load with fan – MJ/ekW-hr (Btu/ekW-hr)	13.11	(12434)
Cooling System		
Radiator air flow restriction – kPa (in. water)	.12	(.5)
Radiator air flow – m <sup>3</sup> /min (cfm)	1432	(50570)
Radiator ambient capability @ 304 m (1000 ft) – °C (°F)	37	(98)
Auxiliary circuit temperature (maximum inlet) – °C (°F)	54	(130)
Jacket water temperature (maximum outlet) – °C (°F)	99	(210)
Inlet Air		
Combustion air inlet flow rate (0°C, 101.3 kPa)/(77°F, 14.7 psia) – m <sup>3</sup> /min (cfm)	44.57	(1575)
Altitude Capability		
At 25°C (77°F) ambient, above sea level – m (ft)	610	(2000)
Exhaust System		
Exhaust temperature – engine outlet – °C (°F)	409	(769)
Air flow (0°C, 101.3 kPa)/(77°F, 14.7 psia) – Nm <sup>3</sup> /bKW-hr (ft <sup>3</sup> /min)	4.36	(1575)
Exhaust Gas Mass Flow – kg/bkW-hr (lb/hr)	5.85	(7259)
Heat Rejection		
Heat rejection to jacket water – kW (Btu/min)	367	(20861)
Heat rejection to exhaust (LHV to 120°C/248°F) – kW (Btu/min)	430	(24444)
Heat rejection to auxiliary circuit – kW (Btu/min)	115	(6554)
Heat rejection to atmosphere from engine and generator – kW (Btu/min)	92	(5255)

## Weights and Dimensions



Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Dry Weight kg (lb)
4634.5 (182.46)	2104.0 (82.83)	2529.1 (99.57)	6412.8 (14,140)

**Note:** For reference only. Do not use for installation design. Contact your local Cat dealer for precise weights and dimensions.

## Ratings Definitions

### Standby

Output available with varying load for the duration of an emergency outage. Average power output is 100% of the standby power rating. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

### Applicable Codes and Standards

AS 1359, CSA C22.2 No. 100-04, UL 489, UL 869, UL 2200, NFPA37, NFPA70, NFPA99, NFPA110, IBC, IEC 60034-1, ISO 3046, ISO 8528, NEMA MG1-22, NEMA MG1-33, 2014/35/EU, 2006/42/EC, 2014/30/EU.

**Note:** Codes and standards compliance may not be available in all model configurations. Please consult your local Cat dealer for availability.

### Fuel Rates

1. For transient response, ambient, and altitude capabilities consult your local Cat dealer.
2. Fuel pressure range specified is to the engine fuel control valve. Additional fuel train components may be required and should be considered in pressure and flow calculations.
3. For a complete reference of definitions and conditions see datasheet referenced above.

<http://www.cat.com/powergeneration>

©2018 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, ADEM, "Caterpillar Yellow", the "Power Edge" trade dress as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.