

# Cat® G3512 WITH FAST RESPONSE

## Gas Generator Sets



Image shown may not reflect actual configuration

Bore – mm (in)	170 (6.7)
Stroke – mm (in)	190 (7.5)
Displacement – L (in³)	52 (3173)
Compression Ratio	9.7
Aspiration	Turbocharged
Fuel System	Electronic Fuel Control Valve
Governor Type	ADEM™ A4

Standby and Continuous 60 Hz ekW (kVA) w/Fan	Emissions Performance
1000 (1250) *	NOx Selectable (0.5 to 2.0 g/bhp-hr)
750 (938) *	NOx Selectable (0.5 to 2.0 g/bhp-hr)

\*SCR system only available on Standby Applications (0.5 - 1.0g Nox) from G3512 NPN price list with limited options through Customer Solutions Quoter (CSQ) and performance data upon request.

### Standard Features

#### Cat® Natural Gas 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
- Twelve cylinder design to optimize transient performance

#### Generator Set Package

- Accepts 100% block load in one step
- Designed to meet NFPA 110, Type 10 starting and loading requirements
- Conforms to ISO 8528-5 G3 load acceptance and steady state 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 43°C (110°F)
- Package tested to ensure proper cooling of complete generator set

#### Cat Energy Control System (ECS)

- 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
- Graphical touchscreen display
- Easily upgradeable

#### Warranty

- 24 months/1000-hour warranty for standby ratings
- 12 months/unlimited hour warranty for continuous ratings
- Extended service coverage 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**

- Industrialgrade (15 dB)
- Residential grade (18 dB)
- Criticalgrade(25 dB)

- Spark arresting
- Exhaust SCR System \*

#### **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
- LSI-G-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**

- Cat ECS 100
- EMCP 4.4

#### **Attachments**

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

### Charging

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

### Vibration Isolators

- Rubber
- Spring
- Seismic rated

### Cat Connect

#### **Connectivity**

- Ethernet
- Cellular

### Extended Service Options

#### **Terms**

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

#### **Coverage**

- Silver
- Gold
- Platinum
- Platinum Plus

### Ancillary Equipment

- Automatic transfer switch (ATS)
- Paralleling switchgear
- Paralleling controls

### Certifications

- ULC 2200 Listed
- OSHPD pre-approval

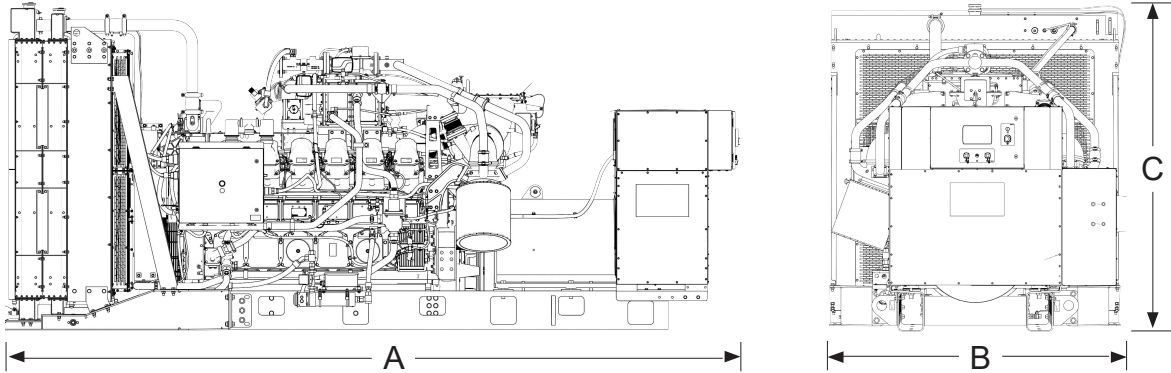
**Note:** Some options may not be available on all models. Certifications may not be available with all model configurations. Consult factory for availability.

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## Package Performance

<b>Performance</b>		<b>Standby &amp; Continuous</b>			
Frequency	60 Hz				
Genset power rating @ 0.8 power factor – kW (kVA)	750 (938)		1000 (1250)		
Emissions	2 g/bhp-hr NOx				
Performance number	EM2091-01		EM1622-02		
<b>Fuel Consumption</b>					
100% load with fan – MJ/ekW-hr (Btu/ekW-hr)	10.57	(10025)	10.05	(9526)	
75% load with fan – MJ/ekW-hr (Btu/ekW-hr)	11.39	(10799)	10.52	(9971)	
50% load with fan – MJ/ekW-hr (Btu/ekW-hr)	12.96	(12287)	11.57	(10970)	
<b>Cooling System</b>					
Radiator air flow restriction – kPa (in. water)	0.12	(0.5)	0.12	(0.5)	
Radiator air flow – m <sup>3</sup> /min (cfm)	1830	(64625)	1830	(64625)	
Radiator ambient capability @ 304 m (1000 ft) – °C (°F)	45	(113)	45	(113)	
Auxiliary circuit temperature (maximum inlet) – °C (°F)	54	(130)	54	(130)	
Jacket water temperature (maximum outlet) – °C (°F)	99	(210)	99	(210)	
<b>Inlet Air</b>					
Combustion air inlet flow rate – Nm <sup>3</sup> /bkW-hr (ft <sup>3</sup> /min)	4.38	(2339)	4.18	(2941)	
<b>Altitude Capability</b>					
At 25°C (77°F) ambient, above sea level – m (ft)	2910	(9547)	2025	(6644)	
<b>Exhaust System</b>					
Exhaust temperature – engine outlet – °C (°F)	513	(956)	508	(947)	
Exhaust Gas Flow – Nm <sup>3</sup> /bkW-hr (ft <sup>3</sup> /min)	4.67	(6657)	4.45	(8320)	
Exhaust Gas Mass Flow – kg/bkW-hr (lb/hr)	5.87	(10757)	5.60	(13527)	
<b>Heat Rejection</b>					
Heat rejection to jacket water circuit (JW+AC1+OC) – kW (Btu/min)	486	(27927)	600	(34126)	
Heat rejection to jacket water – kW (Btu/min)	365	(27668)	422	(24010)	
Heat rejection to exhaust (LHV to 120°C/248°F) – kW (Btu/min)	602	(34230)	748	(42513)	
Heat rejection to auxiliary circuit temperature – kW (Btu/min)	65	(3671)	93	(5272)	
Heat rejection to atmosphere from engine and generator – kW (Btu/min)	126	(7185)	151	(8605)	

## Weights and Dimensions



Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Dry Weight kg (lb)
6011(236)	2809 (110)	2671 (105)	12,500 (27,500)

**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.

### Continuous

Output available with non-varying load for unlimited time. Average power output is 70-100% of the continuous power rating. Typical peak demand is 100% of continuous rating for 100% of the operating hours.

### Applicable Codes and Standards

AS 1359, ULC 2200 3rd edition, UL 489, UL 869A, IEC 60034-1, ISO 3046, ISO 8528, NEMA MG1-22, NEMA MG1-33, 2014/35/EU, 2006/42/EC, 2014/30/EU and facilitates compliance to NFPA 37, NFPA 70, NFPA 99, NFPA 110.

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

### Fuel Rates

- For transient response, ambient, and altitude capabilities consult your local Cat dealer.
- 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.
- For a complete reference of definitions and conditions see the following datasheets

#### a. 750ekw Standby

EM2091 w/fan - 2 g/bhp-hr NOx  
 EM2093 w/fan - 1 g/bhp-hr NOx \*  
 EM2095 w/fan - 0.5 g/bhp-hr NOx \*  
 EM2092 w/o fan - 2 g/bhp-hr NOx  
 EM2094 w/o fan - 1 g/bhp-hr NOx  
 EM2096 w/o fan - 0.5 g/bhp-hr NOx

#### b. 1000ekw Standby

EM1622 w/fan - 2 g/bhp-hr NOx  
 EM2089 w/fan - 1 g/bhp-hr NOx \*  
 EM2087 w/fan - 0.5 g/bhp-hr NOx \*  
 EM1623 w/o fan - 2 g/bhp-hr NOx  
 EM2090 w/o fan - 1 g/bhp-hr NOx  
 EM2088 w/o fan - 0.5 g/bhp-hr NOx

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[www.cat.com/electricpower](http://www.cat.com/electricpower)

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