

Cat® G3512

Load Management Gas Generator Sets



Image shown may not reflect actual configuration

| | |
|-------------------------------------|-------------------------------|
| Bore – mm (in) | 170 (6.7) |
| Stroke – mm (in) | 190 (7.5) |
| Displacement – L (in ³) | 52 (3173) |
| Compression Ratio | 9.7 |
| Aspiration | Turbocharged |
| Fuel System | Electronic Fuel Control Valve |
| Governor Type | ADEM™ A4 |

| Continuous – Load Management 60 Hz ekW (kVA) | Emissions Performance |
|---|---|
| 750 (937) | NOx configurable from 0.5 to 2.0 g/bhp-hr |

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 and facilitates compliance with NPFA 110, Type 10 starting and loading requirements
- Conforms to ISO 8528-5 G2 load acceptance criteria
- Reliability verified through torsional vibration, fuel consumption, oil consumption, transient performance, and endurance testing

Alternators

- 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 45°C (113°F)
- Package tested to ensure proper cooling of complete generator set

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

Alternator

Output voltage

- 220V 2400V
- 240V 4160V
- 280V 12470V
- 380V 13200V
- 440V 13800V
- 480V 63000V
- 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

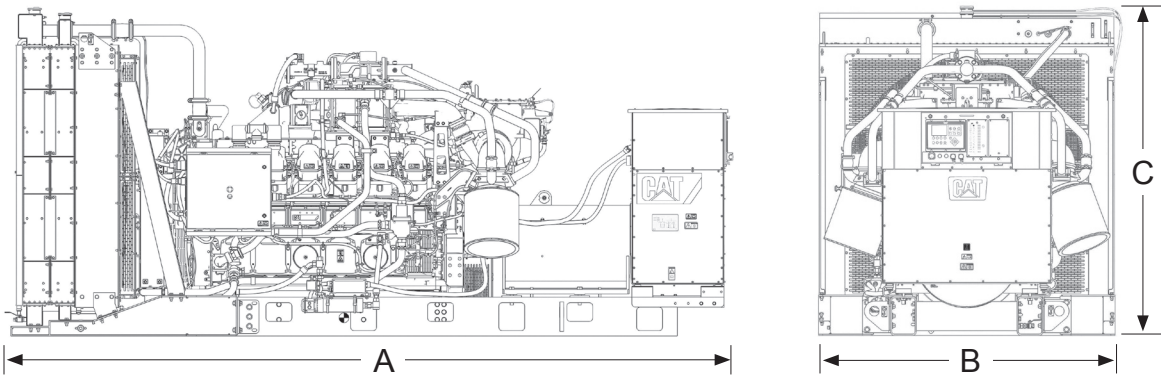
- UL 2200 Listed
- CSA Certified
- EU Declaration of Conformity
- EEC Declaration of Conformity

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 | | Continuous – Load Management | |
|---|---------------------|-------------------------------------|--|
| Frequency | 60 Hz | | |
| Genset power rating @ 0.8 power factor – kW (kVA) | 750 | (938) | |
| Performance number | EM2093-01 | | |
| Fuel Consumption | | | |
| 100% load with fan – MJ/ekW-hr (Btu/ekW-hr) | 10.78 | (10222) | |
| 75% load with fan – MJ/ekW-hr (Btu/ekW-hr) | 11.53 | (10930) | |
| 50% load with fan – MJ/ekW-hr (Btu/ekW-hr) | 13.10 | (12422) | |
| Cooling System | | | |
| Radiator air flow restriction – kPa (in. water) | .12 | (.5) | |
| Radiator air flow – m ³ /min (cfm) | 1830 | (64625) | |
| Radiator ambient capability @ 152 m (500 ft) – °C (°F) | 44 | (112) | |
| SCAC circuit temperature (maximum inlet) – °C (°F) | 43 | (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 ³ /min (cfm) | 4.54 | (2422) | |
| Altitude Capability | | | |
| At 25°C (77°F) ambient, above sea level – m (ft) | 2862 | (9390) | |
| Exhaust System | | | |
| Exhaust temperature – engine outlet – °C (°F) | 512 | (953) | |
| Air flow (0°C, 101.3 kPa)/(@ engine outlet temperature, 14.7 psia) – Nm ³ /bKW-hr (ft ³ /min) | 4.83 | (6874) | |
| Exhaust Gas Mass Flow – kg/bkW-hr (lb/hr) | 6.08 | (11133) | |
| Heat Rejection | | | |
| LHV input – kW (Btu/min) | 2290 | (130250) | |
| Heat rejection to jacket water – kW (Btu/min) | 366 | (20841) | |
| Heat rejection to atmosphere – kW (Btu/min) | 135 | (7694) | |
| Heat rejection to lube oil (OC) – kW (Btu/min) | 73 | (4158) | |
| Heat rejection to exhaust (LHV to 77°F) – kW (Btu/min) | 792 | (45029) | |
| Heat rejection to exhaust (LHV to 248°F) – kW (Btu/min) | 620 | (35256) | |
| Heat rejection to A/C – Stage 1 (1AC) – kW (Btu/min) | 52 | (2969) | |
| Heat rejection to A/C – Stage 2 (2AC) – kW (Btu/min) | 67 | (3833) | |
| Pump power – kW (Btu/min) | 17 | (971) | |
| Emissions | | | |
| EPA – S.I. Stationary Continuous | U.S. NSPS Compliant | | |
| NOx (as NO ₂) – mg/Nm ³ (g/bhp-hr) | 431 | (1) | |
| CO – mg/Nm ³ (g/bhp-hr) | 838 | (1.94) | |
| THC (mol. wt. of 15.84) – mg/Nm ³ (g/bhp-hr) | 1174 | (2.72) | |
| NMHC (mol. wt. of 15.84) – mg/Nm ³ (g/bhp-hr) | 188 | (0.44) | |
| Exhaust O ₂ – % dry | 9.3 | | |

Weights and Dimensions



| Dim "A" mm (in) | Dim "B" mm (in) | Dim "C" mm (in) | Dry Weight kg (lb) |
|--------------------|--------------------|--------------------|-----------------------|
| 5224 (205.7) | 2286 (90.0) | 2525 (99.4) | 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

Continuous

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

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 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 EM1508.

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

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