

# Cat® G3516B

## Natural 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)	69.0 (4211)
Aspiration	Turbocharged
Fuel System	Electronic Fuel Control Valve
Governor Type	ADEM™ A3

	Fuel Type	ekW (kVA)	Compression Ratio	Engine Speed – rpm
Continuous 60 Hz	Natural Gas	1300 (1625)	11.0:1	1800

### 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
- Conservative power density for reliability and long operational life span
- High percentage of component commonality with diesel engines

#### Generator Set Package

- Reliability verified through torsional vibration, fuel consumption, oil consumption, transient performance, and endurance testing

#### Generators

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

#### Applications

- Caterpillar generator sets are capable of maximizing power production opportunities in an extensive range of industries

#### 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

- 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 System

- Air inlet adapter

#### Cooling System

- Mechanical joint assembly

#### Exhaust System

- Elbows
- Expanders
- Flanges
- Flexible fittings

#### Fuel System

- Fuel filter - shipped loose
- Fuel regulator - shipped loose

#### General

- Barring group

#### Lubrication

- Lubricating oil (NGEO)
- Oil level regulator
- Electric prelube
- Positive crankcase ventilation
- Duplex oil filter

#### Mufflers

- Industrial Grade (15dB)
- Residential Grade (18dB)
- Critical Grade (25dB)
- Spark Arresting

#### Protection System

- Explosion Relief Valves

#### Starting/Charging

- Charging alternator - 60A
- Battery charger - 20A
- Battery charger - 10A
- Oversized batteries
- Battery cables / racks
- Air starters
- Jacket water heater

### Generators

#### Output voltage

- 380V
- 440V
- 480V
- 600V
- 2400V
- 4160V

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

- 105°C
- 80°C

#### Attachments

- Anti-condensation heater
- Generator RTD module
- Neutral Ground

### Power Termination

#### Type

- NEMA Bus bar
- Circuit breaker

#### Circuit Breaker Options

- 1600A
- 2000A
- UL  IEC
- 3-pole  4-pole
- Manually operated
- Electrically operated

#### Trip Unit Options

- LSI  LSI-G
- LSIG-P

### Cat Connect

#### Connectivity

- Ethernet
- Satellite
- Cell

### Control System

#### Controller

- EMCP 4.3
- EMCP 4.4

#### Attachments

- Discrete I/O module
- Load share module
- Local annunciator module
- Remote annunciator module
- Remote monitoring software

### Vibration Isolators

- Rubber
- Spring
- Seismic rated

### Enclosure

- Weather protective
- Sound attenuated

#### Attachments

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

### Ancillary Equipment

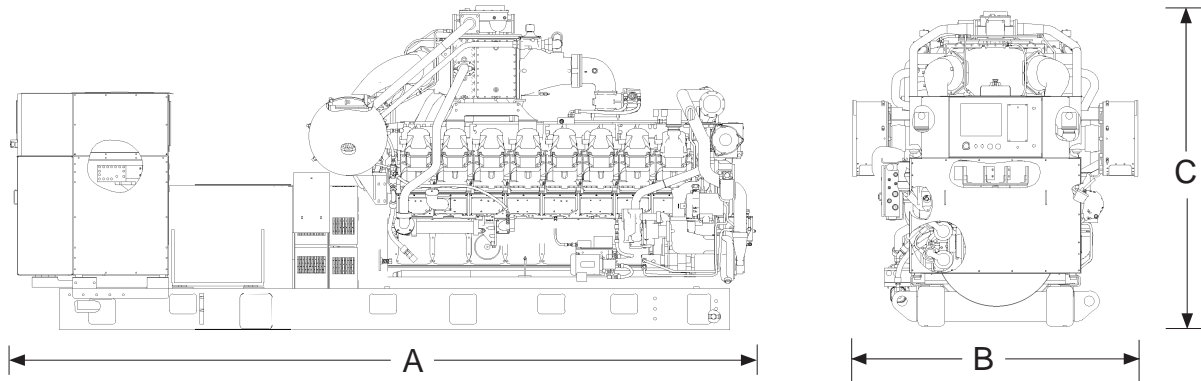
- Automatic transfer switch (ATS)
- Uninterruptible power supply (UPS)
- Paralleling switchgear
- Paralleling controls

**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			
	60 Hz			
Frequency	60 Hz			
Genset power rating @ 0.8 power factor – kW (kVA)	1300	(1625)	1300	(1625)
Engine speed – rpm	1800		1800	
Emissions – mg/Nm <sup>3</sup> (g/bhp-hr) NOx	205	(0.5)	429	(1.0)
Performance number	DM5643-03		DM5645-03	
<b>Fuel Consumption</b>				
100% load with fan – MJ/ekW-hr (Btu/ekW-hr)	10.51	(9965)	10.23	(9704)
75% load with fan – MJ/ekW-hr (Btu/ekW-hr)	10.99	(10415)	10.60	(10046)
50% load with fan – MJ/ekW-hr (Btu/ekW-hr)	11.64	(11036)	11.50	(10900)
<b>Cooling System</b>				
Auxiliary circuit temperature (maximum inlet) – °C (°F)	54	(130)	54	(130)
Jacket water temperature (maximum outlet) – °C (°F)	92	(198)	92	(198)
<b>Inlet Air</b>				
Combustion air inlet flow rate (0°C, 101.3 kPa)/(77°F, 14.7 psia) – Nm <sup>3</sup> /bkW-hr (ft <sup>3</sup> /min)	4.73	(4121)	4.51	(3932)
<b>Altitude Capability</b>				
At 25°C (77°F) ambient, above sea level – m (ft)	682	(2238)	903	(2963)
<b>Exhaust System</b>				
Exhaust temperature – engine outlet – °C (°F)	523	(974)	530	(986)
Exhaust gas flow (0°C, 101.3 kPa, 14.5psia) – Nm <sup>3</sup> /bkW-hr (ft <sup>3</sup> /min)	5.03	(11850)	4.80	(11418)
Exhaust gas mass flow – kg/bkW-hr (lb/hr)	6.43	(18939)	6.05	(18086)
<b>Heat Rejection</b>				
Heat rejection to jacket water – kW (Btu/min)	504	(28688)	491	(27939)
Heat rejection to exhaust (LHV to 120°C/248°F) – kW (Btu/min)	1086	(61754)	1056	(60078)
Heat rejection to auxiliary circuit – kW (Btu/min)	140	(7961)	124	(7052)
Heat rejection to atmosphere from engine and generator – kW (Btu/min)	186	(10565)	186	(10565)
Heat rejection to jacket water circuit (JW+OC+AC1) – kW (Btu/min)	799	(45469)	774	(44029)

## Weights and Dimensions



Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Dry Weight kg (lb)
5519.10 (217.28)	2180.20 (85.83)	2402.00 (94.56)	12618 (27823)

**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 operating hours.

### Applicable Codes and Standards

AS1359, CSA C22.2 No100-04, UL142, UL489, UL869, UL2200, NFPA37, NFPA70, NFPA99, NFPA110, IEC60034-1, ISO3046, ISO8528, NEMA MG1-22, NEMA MG1-33, 2006/95/EC, 2006/42/EC, 2004/108/EC.

**Note:** Codes and standards compliance 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
  - 1300ekw Continuous /Standard (W/ Pumps)**  
DM5643-03 (0.5g/bhp-hr NOx) - SCAC IN/OUT: 130/198°F
  - 1300ekw Continuous /Standard (W/ Pumps)**  
DM5645-03 (1.0g/bhp-hr NOx) - SCAC IN/OUT: 130/198°F

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

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