

Cat® G3516A

Natural Gas Generator Sets



Bore – mm (in)	170 (6.7)
Stroke – mm (in)	190 (7.5)
Displacement – L (in ³)	69.0 (4210)
Aspiration	Turbocharged
Fuel System	Electronic Fuel Control Valve
Governor Type	ADEM™ A4

Image shown may not reflect actual configuration

	Fuel Type	ekW (kVA)	Compression Ratio	Engine Speed – rpm
Continuous 50 Hz	Natural Gas	1030 (1288)	11.0:1	1500
Continuous 60 Hz	Natural Gas	810 (1012)	8.0:1	1200

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

- 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

Market Spread

- 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

- 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
- LSI-G

Enclosure

- Weather protective
- Sound attenuated

Attachments

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

Fuel System Pressure

- Standard

Control System

Controller

- 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

- 2006/42/EC Declaration of Incorporation
- 2006/95/EC Declaration of Incorporation

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

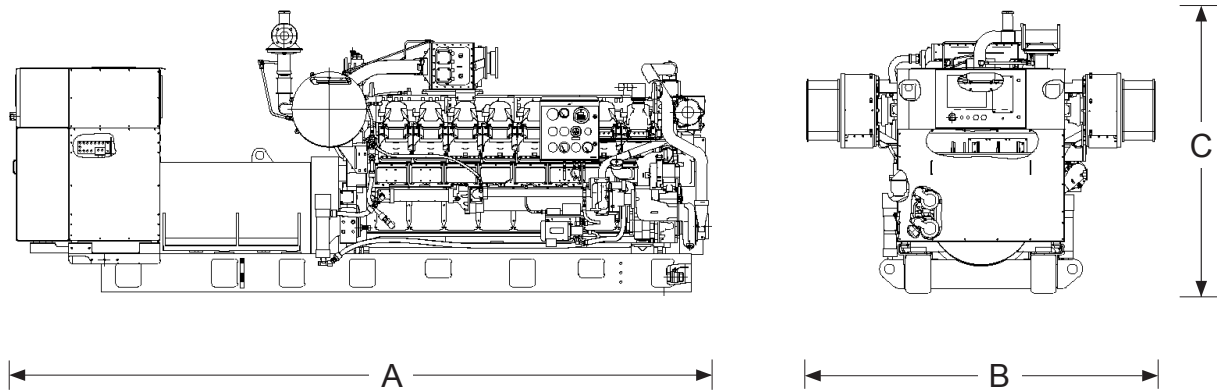
50 Hz Standard Package Performance – AC and JW Pumps

Performance	Continuous	
Frequency	50 Hz	
Genset power rating @ 0.8 power factor – ekW (kVA)	1030	(1288)
Engine speed – rpm	1500	
Emissions – mg/Nm ³ (g/bhp-hr) NOx	250	(0.55)
Performance number	EM0823-01	
Fuel Consumption		
100% load with fan – MJ/ekW-hr (Btu/ekW-hr)	10.31	(9776)
75% load with fan – MJ/ekW-hr (Btu/ekW-hr)	10.64	(10085)
50% load with fan – MJ/ekW-hr (Btu/ekW-hr)	11.32	(10737)
Cooling System		
Auxiliary circuit temperature (maximum inlet) – °C (°F)	32	(90)
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) – Nm ³ /bKW-hr (ft ³ /min)	4.58	(3157)
Altitude Capability		
At 25°C (77°F) ambient, above sea level – m (ft)	350	(1148)
Exhaust System		
Exhaust temperature – engine outlet – °C (°F)	508	(946)
Exhaust gas flow (0°C, 101.3 kPa)/(77°F, 14.7 psia) – Nm ³ /bKW-hr (ft ³ /min)	4.88	(8925)
Exhaust gas mass flow – kg/bkW-hr (lb/hr)	6.14	(14512)
Heat Rejection		
Heat rejection to jacket water – kW (Btu/min)	431	(24532)
Heat rejection to exhaust (LHV to 120°C/248°F) – kW (Btu/min)	222	(45538)
Heat rejection to atmosphere from engine and generator – kW (Btu/min)	157	(8924)
Heat rejection to jacket water circuit (JW+OC+AC1) – kW (Btu/min)	736	(41905)

60 Hz Standard Package Performance – AC and JW Pumps

Performance		Continuous	
Frequency	60 Hz		
Genset power rating @ 0.8 power factor – ekW (kVA)	810	(1012)	
Engine speed – rpm	1200		
Emissions – mg/Nm ³ (g/bhp-hr) NOx	846	(2.00)	
Performance number	DM5675-05		
Fuel Consumption			
100% load with fan – MJ/ekW-hr (Btu/ekW-hr)	10.95	(10382)	
75% load with fan – MJ/ekW-hr (Btu/ekW-hr)	11.24	(10653)	
50% load with fan – MJ/ekW-hr (Btu/ekW-hr)	11.87	(11259)	
Cooling System			
Auxiliary circuit temperature (maximum inlet) – °C (°F)	32	(90)	
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) – Nm ³ /bkW-hr (ft ³ /min)	4.23	(2324)	
Altitude Capability			
At 25°C (77°F) ambient, above sea level – m (ft)	1524	(5000)	
Exhaust System			
Exhaust temperature – engine outlet – °C (°F)	453	(848)	
Exhaust gas flow (0°C, 101.3 kPa)/(77°F, 14.7 psia) – Nm ³ /bkW-hr (ft ³ /min)	4.53	(6153)	
Exhaust gas mass flow – kg/bkW-hr (lb/hr)	5.69	(10737)	
Heat Rejection			
Heat rejection to jacket water – kW (Btu/min)	670	(38096)	
Heat rejection to exhaust (LHV to 120°C/248°F) – kW (Btu/min)	510	(28975)	
Heat rejection to atmosphere from engine and generator – kW (Btu/min)	126	(7183)	
Heat rejection to jacket water circuit (JW+OC+AC1) – kW (Btu/min)	897	(51007)	

Weights and Dimensions



Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Dry Weight kg (lb)
5448.30 (214.50)	2179.90 (85.82)	2194.20 (86.39)	12384 (27306)

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 unlimited time. Average power is 70-100% of the continuous rating for 100% of the operating hours 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

- 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
 - 50 Hz 1085ekw Continuous / Standard**
EM0821-03 w/o fan (2.0 g/bhp-hr NOx)
EM0822-03 w/o fan (2.0 g/bhp-hr NOx)
EM0823-01 w/o fan (250 mg/Nm³ NOx)
EM0824-01 w/o fan (250 mg/Nm³ NOx)
EM0825-01 w/o fan (500 mg/Nm³ NOx)
EM0826-01 w/o fan (500 mg/Nm³ NOx)
EM2495-00 w/o fan (500 mg/Nm³ NOx)
 - 60 Hz 810ekw Continuous / Standard**
DM5674-05 w/o fan (2.0 g/bhp-hr NOx)
DM5675-05 w/o fan (2.0 g/bhp-hr NOx)
EM0559-03 w/o fan (2.0 g/bhp-hr NOx)
 - 60 Hz 1000ekW Standby / Standard**
EM0749-03 w/o fan (2.0 g/bhp-hr NOx)

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

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

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