

# Cat® G3520

## Gas Generator Sets

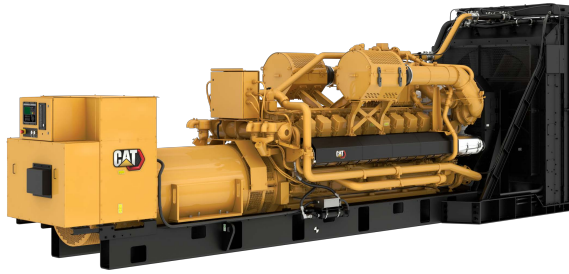


Image shown may not reflect actual configuration

Bore – mm (in)	170 (6.7)
Stroke – mm (in)	215 (8.5)
Displacement – L (in <sup>3</sup> )	97.6 (5956)
Compression Ratio	11.5:1
Aspiration	Turbocharged
Fuel System	Electronic Fuel Control Valve
Governor Type	ADEM™ A4

Standby 60 Hz kW (kVA)	Emissions Performance
2500 (3125)	NOx Selectable (0.5 to 1.0 g/bhp-hr)
2000 (2500)	NOx Selectable (0.5 to 1.0 g/bhp-hr)

### Standard Features

#### Cat® Natural Gas Engine

- Robust 20 cylinder high speed block design provides prolonged life and lower owning and operating costs
- Engineered for standby power
- Designed for maximum performance on low pressure gaseous fuel supply

#### Generator Set Package

- Accepts 100% block load in one step
- Facilitates compliance with NFPA 110, Type 10 starting and loading requirements (LV)
- 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

- Optional radiator available to operate in ambient temperatures up to 43°C (110°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 warranty for standby 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**

- 380V  2400V
- 440V  4160V
- 480V  12470V
- 600V  13200V
- 2400V  13800V

#### **Temperature Rise (over 40°C)**

- 150°C  105°C
- 125°C/130°C  80°C

#### **Winding type**

- Random wound
- Form wound

#### **Excitation**

- Permanent magnet (PM)

#### **Attachments**

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

### Radiator

- Factory Provided (2 MW Only)
- Dealer / Customer Provided

### 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**

- EMCP 4.3
- 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

### 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

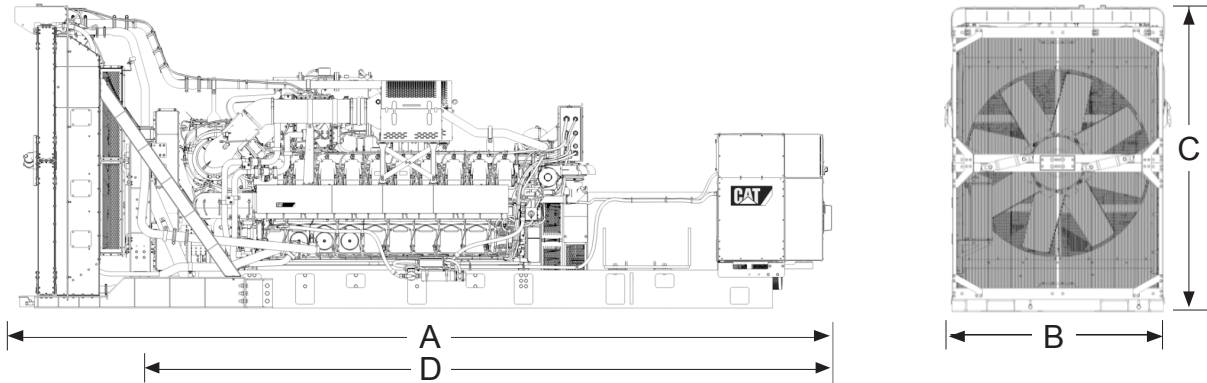
- UL 2200 Listed
- CSA Certified

**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**

<b>Performance</b>		<b>Standby</b>			
Frequency	60 Hz				
Genset power rating @ 0.8 power factor – ekW (kVA)	2000 (2500)		2500 (3125)		
Emissions	1 g/bhp-hr NOx				
Performance number	EM4307		EM4298		
<b>Fuel Consumption</b>					
100% load with fan – MJ/ekW-hr (Btu/ekW-hr)	9.54	(9048)	9.32	(8835)	
75% load with fan – MJ/ekW-hr (Btu/ekW-hr)	9.91	(9394)	9.66	(9164)	
50% load with fan – MJ/ekW-hr (Btu/ekW-hr)	10.84	(10280)	10.38	(9840)	
<b>Cooling System (Optional Factory Radiator)</b>					
Radiator air flow restriction – kPa (in. water)	0.12	(0.5)	Not Available	Not Available	
Radiator air flow – m <sup>3</sup> /min (cfm)	1814	(64060)	Not Available	Not Available	
Radiator ambient capability @ 304 m (1000 ft) – °C (°F)	35	(100)	Not Available	Not Available	
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)	4.26	(6030)	4.24	(7377)	
<b>Altitude Capability</b>					
At 25°C (77°F) ambient, above sea level – m (ft)	2690	(8825)	1870	(6135)	
<b>Exhaust System</b>					
Exhaust temperature – engine outlet – °C (°F)	472	(881)	452	(846)	
Exhaust Gas Flow – Nm <sup>3</sup> /bkW-hr (ft <sup>3</sup> /min)	4.52	(16197)	4.50	(19295)	
Exhaust Gas Mass Flow – kg/bkW-hr (lb/hr)	5.70	(27670)	5.67	(33846)	
<b>Heat Rejection</b>					
Heat rejection to jacket water circuit (JW+AC1+OC) – kW (Btu/min)	1013	(57623)	1321	(75144)	
Heat rejection to jacket water – kW (Btu/min)	589	(33505)	731	(41589)	
Heat rejection to exhaust (LHV to 120°C/248°F) – kW (Btu/min)	1374	(78152)	1585	(90123)	
Heat rejection to auxiliary circuit – kW (Btu/min)	220	(12508)	304	(17284)	
Heat rejection to atmosphere from engine and generator – kW (Btu/min)	275	(15636)	301	(17093)	

## Weights and Dimensions



Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Dim "D" <sup>(w/o rad)</sup> mm (in)	Dry Weight kg (lb)
8534 (336)	2386 (94)	3230 (128)	6736 (266)	22,000 (48,501)

**Note:** For reference only. Do not use for installation design, pricelist offers many sizes of generators. 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 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
  - 2000ekw Standby / Emergency  
EM4307 w/fan, EM4301 w/o fan - 1 g/bhp-hr NOx  
EM4306 w/fan, EM4300 w/o fan - 0.5 g/bhp-hr NOx
  - 2500ekw Standby / Emergency  
EM4298 w/o fan - 1 g/bhp-hr NOx  
EM4297 w/o fan - 0.5 g/bhp-hr NOx

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

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