

# Cat® DG175 GC

## SPARK-IGNITED GENERATOR SETS



Image shown may not reflect actual configuration.

## Standby/Demand Response

### 175 kW

219 kVA – 60 Hz

- UL2200:** Evaluated by ETL to UL Standard for Safety UL2200
- CSA:** Designed in accordance to CSA22.2 standards
- NFPA:** Facilitates compliance with NFPA110
- Type 10:** Product was tested to NFPA110 Type 10

## BENEFITS & FEATURES

### CAT® GENERATOR SET PACKAGE

Cat natural gas fuel generator sets deliver dependable, clean, economical power even in the most demanding conditions. Cat generator sets are available in a wide range of configurations with optional equipment. Cat generator sets are designed, engineered, and manufactured for optimal performance. All major components are tested individually. Once assembled, the entire unit is tested at and above 100% of rated load for safety and operation. The generator set facilitates compliance with NFPA 110 and meets ISO 8528-5 requirements for transient response.

These complete, ready-to-run packages have another distinct advantage. They all come with the comprehensive service and support of Cat dealers – beginning with prompt delivery and ongoing support throughout the life of the generator set.

### ENGINES

The spark-ignited engines features include Cat air filter (dry, disposable), radiator outlet duct adapter, oil filters, flexible exhaust connection (open generator sets), and are factory filled with Caterpillar approved oil and extended life coolant.

### COOLING SYSTEM

The cooling system is designed to operate in 50°C/122°F ambient temperatures. It has been designed and tested to ensure proper generator set cooling, and includes the radiator, fan, belts, and all guarding installed as standard. Contact your Cat dealer for specific ambient and altitude capabilities.

### ALTERNATOR

Full load capacity, three-phase, 12 lead, and reconnectable alternator built for extended, dependable life. Features include permanent magnet excitation, amortisseur winding, skewed stator, voltage adjustment through the EMCP controller, Class H winding insulation, and 2/3 pitch incorporated.

### EMCP CONTROL PANELS

The Cat EMCP 4.2B control panel is fully equipped with all necessary engine gauges, AC meters, and warnings, providing expanded generator set protection and monitoring. Additional monitoring and expansion modules provide control and protection for critical installations and applications.

## SPECIFICATIONS

### ENGINE SPECIFICATIONS

|                         |                                      |
|-------------------------|--------------------------------------|
| Engine Model            | 14.2 L, In-line 6, 4-cycle           |
| Bore x Stroke           | 135 mm x 165 mm (5.31 in x 6.50 in)  |
| Displacement            | 14.17 L (864.71 in <sup>3</sup> )    |
| Compression Ratio       | 9.5:1                                |
| Aspiration              | Turbocharged-Aftercooled             |
| Fuel System             | Carburetor, Down Draft               |
| Governor                | Electronic                           |
| Fuel Type               | Natural Gas                          |
| Emission Certifications | U.S. EPA Certified for Non-Emergency |
| Rated Engine Speed      | 1800 rpm                             |

### GENERATOR SET SPECIFICATIONS

|                                  |   |
|----------------------------------|---|
| Alternator Design                | Sealed Bearings, Brushless, IP21  |
| Stator                           | 2/3 Pitch   |
| Poles                            | 4   |
| Available Voltages               | 120/240 VAC (1-phase)<br>120/208, 120/240, 277/480, 346/600 VAC (3-phase) |
| Frequency                        | 60 Hz   |
| Alternator Insulation            | Class H   |
| Voltage Regulator Type           | Full Digital  |
| Available Excitation Types       | Permanent Magnet Excitation   |
| Steady State Regulation Accuracy | ± 0.25%   |
| Harmonic Distortion              | <5%   |

## STANDARD EQUIPMENT

|  |   |
|--|---|
| <b>Engine System</b>                                   | General: <ul style="list-style-type: none"> <li>Oil drain extension</li> <li>Air cleaner</li> <li>Fan guard</li> <li>Stainless steel flexible exhaust connection</li> <li>Critical exhaust silencer</li> <li>Factory-filled oil</li> <li>Radiator duct adapter (open set only)</li> </ul> |
|  | Fuel System: <ul style="list-style-type: none"> <li>Primary and secondary fuel shutoff</li> <li>Flexible fuel line – NPT connection</li> </ul>  |
|  | Cooling System: <ul style="list-style-type: none"> <li>Closed coolant recovery system</li> <li>UV/ozone resistant hoses</li> <li>Factory-installed radiator</li> <li>Radiator drain extension</li> <li>50/50 ethylene glycol antifreeze</li> </ul>  |
|  | Engine Electrical System: <ul style="list-style-type: none"> <li>Battery charging alternator</li> <li>Battery cables</li> <li>Battery tray</li> <li>Solenoid activated starter motor</li> <li>Rubber-booted engine electrical connections</li> </ul>                                      |
| <b>Alternator System</b>                               | Class H insulation material   |
|  | 2/3 pitch   |
|  | Skewed stator   |
|  | Permanent magnet excitation   |
|  | Sealed bearings   |
|  | Amortisseur winding   |
| <b>Generator Set</b>                                   | Full-load capacity alternator   |
|  | Internal generator set vibration isolation  |
|  | Separation of circuits – high/low voltage   |
|  | Separation of circuits – multiple breakers  |
|  | Wrapped exhaust piping  |
|  | Standard factory testing  |
|  | 2-year limited warranty (Standby/Demand Response rated units)   |
| Silencer mounted in the discharge hood (enclosed only) |   |
| <b>Enclosure (if selected)</b>                         | Rust-proof fasteners with nylon washers to protect finish   |
|  | High performance sound-absorbing material   |
|  | Gasketed doors  |
|  | Stamped air-intake louvers  |
|  | Air discharge hoods for radiator-upward pointing  |
|  | Stainless steel lift-off door hinges  |
| Stainless steel lockable handles                       |   |

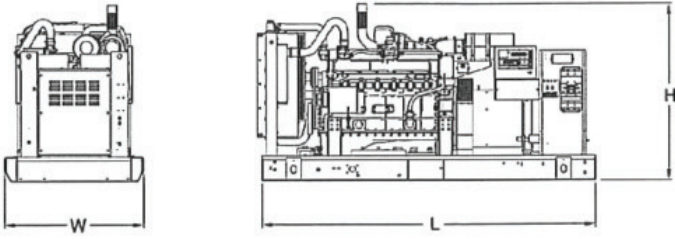
## CONFIGURABLE OPTIONS

|  |   |
|--|---|
| <b>Engine System</b>                             | General: <ul style="list-style-type: none"> <li>Engine block heater</li> <li>Oil heater</li> <li>Air filter restriction indicator</li> <li>Stone guard (open set only)</li> </ul> |
|  | Engine Electrical System: <ul style="list-style-type: none"> <li>20A UL battery charger</li> <li>Battery warmer</li> </ul>  |
| <b>Alternator System</b>                         | Alternator upsizing   |
|  | Anti-condensation heater  |
|  | Tropical coating  |
| <b>Generator Set</b>                             | Extended factory testing (3-phase only)   |
|  | 8-position load center  |
|  | 2-year comprehensive extended warranty  |
|  | 5-year limited extended warranty  |
| <b>Circuit Breaker Options</b>                   | 5-year comprehensive extended warranty  |
|  | Main line circuit breaker   |
|  | 2nd main line circuit breaker   |
|  | Shunt trip and auxiliary contact  |
| <b>Enclosure</b>                                 | Electronic trip breakers  |
|  | Standard enclosure  |
|  | Level 1 sound attenuation   |
|  | Level 2 sound attenuation   |
|  | Level 3 sound attenuation   |
|  | Steel enclosure   |
|  | Aluminum enclosure  |
|  | 150 mph wind kit  |
|  | 12 VDC enclosure lighting kit   |
|  | 120 VAC enclosure lighting kit  |
| AC/DC enclosure lighting kit                     |   |
| <b>Control System</b>                            | Door alarm switch   |
|  | 16-light remote annunciator   |
|  | Oil temperature sender with indication alarm  |
|  | Remote E-stop (break glass-type, surface mount)   |
|  | Remote E-stop (red mushroom-type, surface mount)  |
|  | Remote E-stop (red mushroom-type, flush mount)  |
|  | Remote communication – modem  |
| Remote communication – ethernet                  |   |
| 10A run relay                                    |   |
| Ground fault indication and protection functions |   |

# DG175 GC SPARK-IGNITED GENERATOR SETS

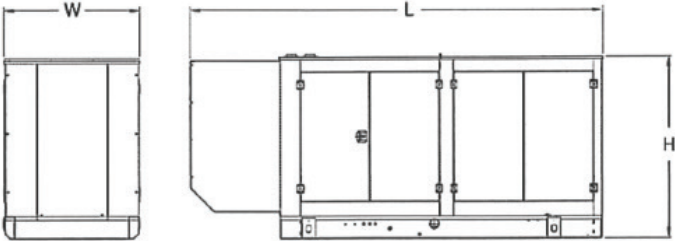


## WEIGHTS & DIMENSIONS\*



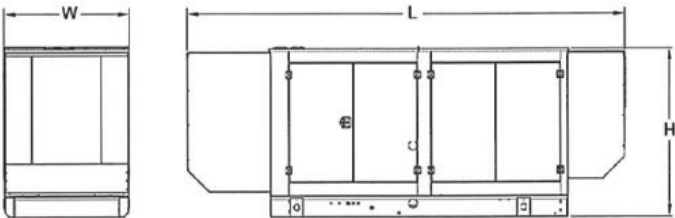
### OPEN SET (Includes Exhaust Flex)

|                    |   |
|--------------------|---|
| L x W x H in (mm)  | 127.95 (3250) x 52.93 (1344.5) x 67.37 (1711.2) |
| Weight lbs (kg)    | 5756 (2610.9)                                   |
| Sound Level (dBA*) | 82.5  |



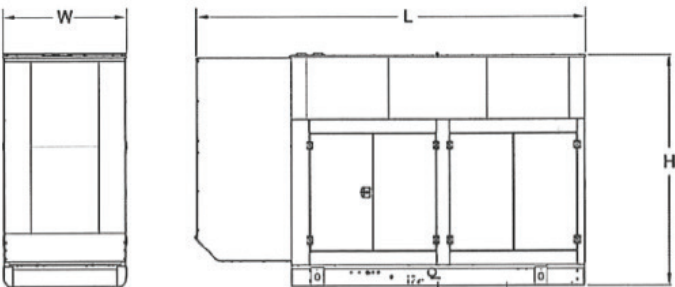
### STANDARD ENCLOSURE

|                    |   |
|--------------------|---|
| L x W x H in (mm)  | 153.89 (3909) x 52.73 (1339.3) x 69.67 (1769.6) |
| Weight lbs (kg)    | Steel: 6577 (2983)<br>Aluminum: 6035 (2738)     |
| Sound Level (dBA*) | 79.9  |



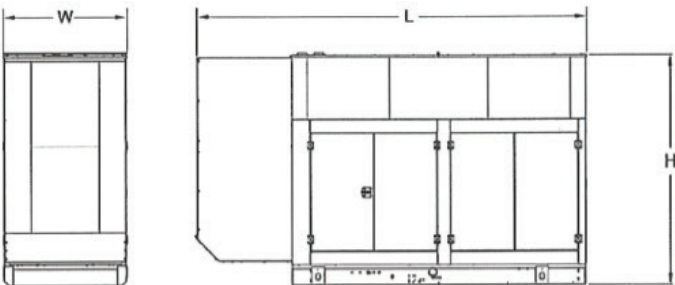
### LEVEL 1 ACOUSTIC ENCLOSURE

|                    |   |
|--------------------|---|
| L x W x H in (mm)  | 154.45 (3922.9) x 53.96 (1370.6) x 93.40 (2372.3) |
| Weight lbs (kg)    | Steel: 6990 (3171)<br>Aluminum: 6176 (2801)       |
| Sound Level (dBA*) | 75.7  |



### LEVEL 2 ACOUSTIC ENCLOSURE

|                    |   |
|--------------------|---|
| L x W x H in (mm)  | 154.45 (3922.9) x 53.96 (1370.6) x 93.40 (2372.3) |
| Weight lbs (kg)    | Steel: 7236 (3282)<br>Aluminum: 6259 (2839)       |
| Sound Level (dBA*) | 70.8  |



### LEVEL 3 ACOUSTIC ENCLOSURE

|                    |  |
|--------------------|--|
| L x W x H in (mm)  | 207.2 (5264) x 63.7 (1618) x 128.90 (3275)   |
| Weight lbs (kg)    | Steel: 10602 (4809)<br>Aluminum: 9638 (4372) |
| Sound Level (dBA*) | 70.1   |

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## EMCP 4.2B CONTROL PANEL FEATURES:



- Control-panel-provided power metering and protective relaying along with engine and generator control and monitoring.
- Embedded with programmable logic controller (PLC) functionality, which enables the generator set to monitor and control other equipment within the operation.
- Includes inputs to collect supplementary data for the PLC to process when operating the generator set and activating external equipment. On a remote location without the ability to supply power to the battery charger, the PLC would likewise monitor the battery voltage to start and stop the machine to preserve battery, ensuring the unit is ready to run when needed.

## DEFINITIONS AND CONDITIONS

**Applicable Codes and Standards:** CSA C22.2 No 100-04, UL 489, UL 869, UL 2200, NFPA 37, NFPA 70, NFPA 99, NFPA 110, IBC, IEC60034-1, ISO3046, ISO8528, NEMA MG 1-22, NEMA MG 1-33.

**Standby/Demand Response:** Output available with varying load for the duration of the interruption of the normal source power. Average power output is 70% of the standby/demand response power rating. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

## 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.

## WORLDWIDE PRODUCT SUPPORT

Cat dealers provide extensive post-sale support including maintenance and repair agreements. Cat dealers have over 1,800 dealer branch stores operating in 200 countries. The Cat S•O•S<sup>SM</sup> program effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by-products.

**Deration:** For power deration rates reference, please consult Cat LEHE1699-00.

**Ratings** are based on SAE J1349 standard conditions. These ratings also apply at ISO3046 standard conditions.

**Fuel Rates** are based on heat value for natural gas of 1015 BTU/SCF @77°F (25°C) and 328 ft (100 m) above sea level. Additional ratings may be available for specific customer requirements, contact your Cat representative for details.

**LET'S DO THE WORK.™**

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