

# Cat® DE800S GC

## Diesel Generator Sets



Image shown might not reflect actual configuration.

Engine	Cat® C27
Bore – mm (in)	137.2 (5.4)
Stroke – mm (in)	152.4 (6.0)
Displacement – L (in <sup>3</sup> )	27.03 (1649.47)
Compression Ratio	16.5:1
Aspiration	TA
Fuel System	MEUI
Governor Type	ADEM™ A4

Model	Standby 60 Hz kVA (kW)	Emissions Performance
DE800S GC	1000 (800)	Optimized for Low Fuel Consumption

### Standard Features

#### Cat® Diesel Engine

- Designed and optimized for low fuel consumption
- Industry-leading mechanical and electrical design
- Industry-leading motor starting capabilities
- High efficiency

#### Generator Set Package

- Conforms to ISO8528-5 G3 load acceptance requirements
- Reliability is verified through prototype testing, which includes torsional vibration, fuel consumption, oil consumption, transient performance, and endurance testing

#### Alternators

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

#### Cooling System

- Cooling systems available to operate in ambient temperatures 50°C @ 0 m (To be validated)
- Tested to ensure proper generator set cooling

#### GCCP Control Panels

- User-friendly set-up and button layout for ease of use
- Multiple parameters are monitored & displayed simultaneously for full visibility
- vThe module can be configured to suit a wide range of applications for user flexibility

#### Warranty

- 24 months/1000-hour warranty for standby and mission critical 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

### Standard and Optional Equipment

#### Engine

##### **Air Cleaner**

- Single element
- Dual element

##### **Starting**

- Standard batteries
- Jacket water heater

##### **Engine Attachments**

- Manual Sump Pump
- Fuel Transfer Pump  
(With fuel tank base only)
- 6" Exhaust Flexible Fittings
- 6" Exhaust Flange Kits

#### Alternator

##### **Output voltage**

- 380V
- 480V

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

- 150°C

##### **Winding type**

- Random wound

##### **Excitation**

- Internal excitation (IE)
- Permanent magnet (PM)

##### **Attachments**

- Anti-condensation heater

#### Power Termination

##### **Type**

- Power Terminal Strips
- Circuit breaker
- 1600A
- 3-pole  4-pole
- Manually operated
- Electrically operated

#### Factory Enclosure

- Sound attenuated

##### **Attachments**

- DC lighting package

#### Fuel Tank

- 1000 L (264 gal) (With Enclosure only)

#### Control System

##### **Controller**

- GCCP 1.3
- GCCP 1.4

##### **Attachments**

- Ground Fault Indication

#### Charging

- Battery charger – 10A

#### Cat Connect

##### **Connectivity**

- Ethernet
- Cellular

#### Extended Service Options

##### **Terms**

- 3 year
- 4 year
- 5 year

##### **Coverage**

- Silver
- Gold

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

# DE800S GC Diesel Generator Sets

## Electric Power

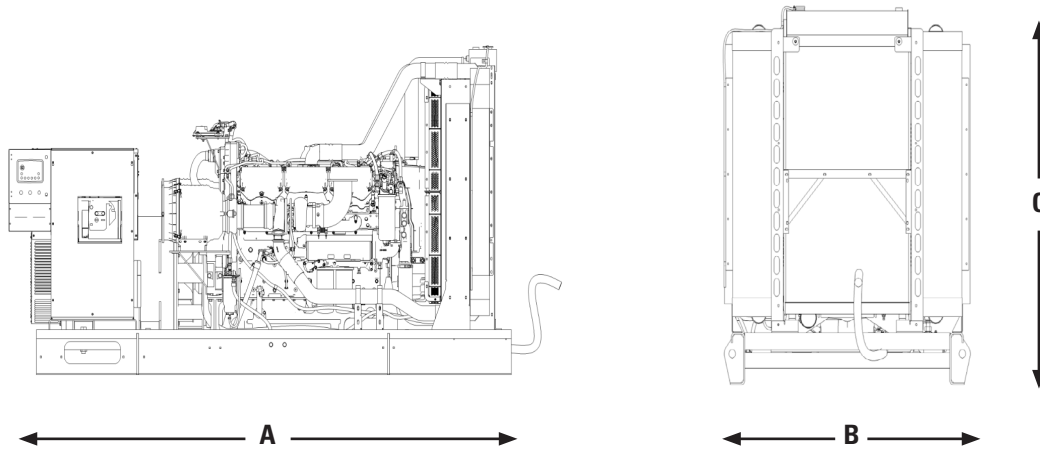


### Package Performance – DE800S GC

Performance	Standby	
Frequency	60 Hz	
Gen set power rating with fan	800 ekW	
Gen set power rating with fan @ 0.8 power factor	1000 kVA	
Fueling strategy	Low Fuel	
Performance number	DM9068-01	
Fuel Consumption		
100% load with fan – L/hr (gal/hr)	213.3	(56.3)
75% load with fan – L/hr (gal/hr)	164.6	(43.5)
50% load with fan – L/hr (gal/hr)	117.3	(31.0)
25% load with fan – L/hr (gal/hr)	72.0	(19.0)
Cooling System		
Radiator air flow restriction (system) – kPa (in. water)	0.12	(0.48)
Radiator air flow – m <sup>3</sup> /min (cfm)	943	(33301)
Engine coolant capacity – L (gal)	55	(14.5)
Radiator coolant capacity – L (gal)	49	(12.9)
Total coolant capacity – L (gal)	104	(27.5)
Inlet Air		
Combustion air inlet flow rate – m <sup>3</sup> /min (cfm)	58.2	(2055.3)
Exhaust System		
Exhaust stack gas temperature – °C (°F)	523.6	(974.4)
Exhaust gas flow rate – m <sup>3</sup> /min (cfm)	160.3	(5661.7)
Exhaust system backpressure (maximum allowable) – kPa (in. water)	6.7	(27.0)
Heat Rejection		
Heat rejection to jacket water – kW (Btu/min)	350	(19909)
Heat rejection to exhaust (total) – kW (Btu/min)	765	(43510)
Heat rejection to aftercooler – kW (Btu/min)	140	(7966)
Heat rejection to atmosphere from engine – kW (Btu/min)	105	(5950)
Heat rejection from alternator – kW (Btu/min)	57	(3213)
Emissions* (Nominal)		
NOx mg/Nm <sup>3</sup> (g/hp-h)	3371.2	(6.20)
CO mg/Nm <sup>3</sup> (g/hp-h)	137.1	(0.25)
HC mg/Nm <sup>3</sup> (g/hp-h)	7.7	(0.02)
PM mg/Nm <sup>3</sup> (g/hp-h)	5.0	(0.01)
Emissions* (Potential Site Variation)		
NOx mg/Nm <sup>3</sup> (g/hp-h)	4079.2	(7.51)
CO mg/Nm <sup>3</sup> (g/hp-h)	256.4	(0.48)
HC mg/Nm <sup>3</sup> (g/hp-h)	14.6	(0.03)
PM mg/Nm <sup>3</sup> (g/hp-h)	9.8	(0.02)

\*mg/Nm<sup>3</sup> levels are corrected to 5% O<sub>2</sub>. Contact your local Cat dealer for further information.

### Weights and Dimensions



Model	Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Wet Weight kg (lb)
DE800S GC	4175 (164.3)	1856 (73.1)	2217.5 (87.3)	6212 (13695)

**Note:** For reference only. Do not use for installation design. Contact your local Cat dealer for precise weights and dimensions.

### Ratings and Definitions

#### Standby

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

#### Mission Critical

Output available with varying load for the duration of the interruption of the normal source power. Average power output is 85% of the mission critical power rating. Typical peak demand up to 100% of rated power for up to 5% of the operating time. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

#### Applicable Codes and Standards

IEC 60034-1, ISO 3046, ISO 8528.

**Note:** Codes may not be available in all model configurations. Please consult your local Cat dealer for availability.

#### Fuel Rates

Fuel rates are based on fuel oil of 35° API [16°C (60°F)] gravity having an LHV of 42,780 kJ/kg (18,390 Btu/lb) when used at 29°C (85°F) and weighing 838.9 g/liter (7.001 lbs/U.S. gal.)

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