

Image shown may not reflect actual configuration

# Cat<sup>®</sup> CG137-8 GAS ENGINE

The Cat<sup>®</sup> CG137-8 is a rugged, rich-burn V-8 built for continuous-duty compression. A proven head design, ADEM A4 engine management, and a packageable footprint make this engine ideal for lift, gathering, and wellhead compression. Also available as a bare engine, the CG137-8 can be ordered without Cat-supplied controls so OEMs can integrate alternate AFR controls and aftertreatment.

## Features and Benefits:

### ENGINE DESIGN

- Tough and durable, with field proven head design.
- When configured with customer-supplied three-way catalyst, the engine is capable of meeting NSPS and on-attainment area emissions levels.
- Improved fuel tolerance allows engine to run on a broad range of fuels.

### ADVANCED HMI

Intuitive and easy-to-use 8-inch color and touch enabled HMI allows for ECM configuration and monitoring system updates, serve tool tests, histograms, screen snapshots, and product status reports, all without the need of a laptop.

### ADVANCED DIGITAL ENGINE MANAGEMENT

The A4 engine management system integrates speed control, air/fuel ratio control, and ignition/detonation controls into a complete engine management system.

### FULL RANGE OF ATTACHMENTS

Large variety of factory-installed engine attachments reduces packaging time.

### TESTING

Every engine is full-load tested to ensure proper engine performance.

## Specifications

V-8, 4 -Stroke-Cycle		Cooling System Capacity	
<b>Serial Prefix</b>	ST8	<b>Total</b>	58.7 L (15.5 gal)
<b>Bore</b>	137 mm (5.4 in)	<b>JW</b>	54.9 L (14.5 gal)
<b>Stroke</b>	152 mm (6.0 in)	<b>SCAC</b>	3.8 L (1 gal)
<b>Displacement</b>	18 L (1099 in <sup>3</sup> )	<b>Lube Oil System (refill)</b>	150 L (40 gal)
<b>Aspiration</b>	Turbocharged-Aftercooled	<b>Oil Change Interval</b>	750 hours
<b>Governor and Protection</b>	Electronic (ADEM <sup>™</sup> 4)	<b>Rotation (from flywheel end)</b>	Counterclockwise
<b>Combustion</b>	Rich Burn - Customer Supplied Catalyst	<b>Flywheel Teeth</b>	136

# CG137-8 Gas Engine

## Technical Data

CG137-8	
Performance Number	EM3829-05
Rating – % O <sub>2</sub>	0.5
Engine Power – kW (bhp)	298 (400)
Engine Speed – rpm	1800
Max Altitude @ Rated Torque and 38 °C (100 °F) – m (ft)	1524 (5000)
Speed Turndown @ Max Altitude, Rated Torque, and 38 °C (100 °F) – %	25
<b>Aftercooler Temperature</b>	
Stage 1 (JW) – °C (°F)	99 (210)
Stage 2 (SCAC) – °C (°F)	54 (130)
<b>Emissions (NTE)*</b>	
NO <sub>x</sub> (as NO <sub>2</sub> ) – g/bkW-h (g/bhp-h)	15.63 (11.65)
CO – g/bkW-h (g/bhp-h)	15.63 (11.65)
CO <sub>2</sub> – g/bkW-h (g/bhp-h)	607 (452)
VOC** – g/bkW-h (g/bhp-h)	0.32 (0.24)
Fuel Consumption *** (ISO) – MJ/bkW-h (btu/bhp-h)	10.51 (7431)
<b>Heat Balance</b>	
Heat Rejection to Jacket Water (JW) – kW (btu/min)	295 (16,780)
Heat Rejection to Lube Oil (OC) – kW (btu/min)	40 (2266)
Heat Rejection to Aftercooler – kW (btu/min)	17 (980)
Heat Rejection to Exhaust – LHV to 25 °C (77 °F) – kW (btu/min)	185 (10,540)
Heat Rejection to Atmosphere – kW (btu/min)	35 (1980)
<b>Exhaust System</b>	
Exhaust Gas Flow Rate – Engine Outlet – N*m <sup>3</sup> /min (scfm)	44.09 (1557)
Exhaust Stack Temperature – Engine Outlet – °C (°F)	446 (835)
<b>Intake System</b>	
Air Inlet Flow Rate – N*m <sup>3</sup> /min (scfm)	15.04 (531)
Gas Pressure – kPag (psig)	138-276 (20-40)

\* at 100% load and speed, listed as not to exceed

\*\* Volatile organic compounds as defined in U.S. EPA 40 CFR 60, subpart JJJJ

\*\*\* ISO 3046/1

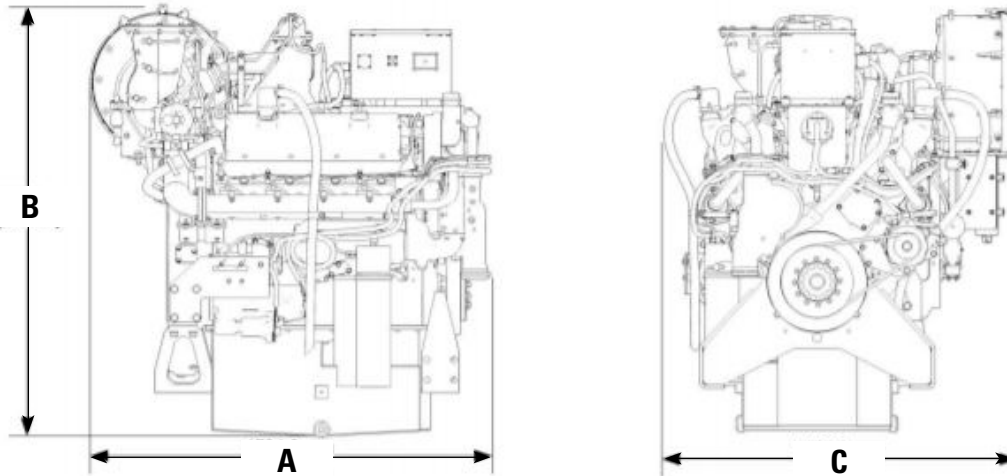
\*\*\*\* For customer supplied AFR controls & aftertreatment contact supplier for performance and emissions data

## Rating Definitions and Conditions

Engine performance is obtained in accordance with SAE J1995, ISO3046/1, BS5514/1, and DIN6271/1 standards. Transient response data is acquired from an engine/generator combination at normal operating temperature and in accordance with ISO3046/1 standard ambient conditions. Also, in accordance with SAE J1995, BS5514/1, and DIN6271/1 standard reference conditions. Conditions: Power for gas engines is based on fuel having an LHV of 33.74 kJ/L (905 Btu/cu ft) at 101 kPa (29.91 in Hg) and 15 °C (59 °F). Fuel rate is based on a cubic meter at 100 kPa (29.61 in Hg) and 15.6 °C (60.1 °F). Air flow is based on a cubic foot at 100 kPa (29.61 in Hg) and 25 °C (77 °F). Exhaust flow is based on a cubic foot at 100 kPa (29.61 in Hg) and stack temperature.

## Dimensions

All dimensions are approximate.



<b>A</b> Length	1734 mm	68.3 in	<b>C</b> Width	1450 mm	57.1 in
<b>B</b> Height	1756 mm	69.1 in	Weight (wet)	2200 kg	4850 lb

Note: Do not use for installation design. See general dimension drawings for detail. Weights and dimensions are approximations.

## Standard and Optional Equipment

### Standard Equipment

#### Air Inlet System

- Air cleaner – single element with service indicator
- Optional air inlet adapter with rain cap - recommended for weather protection

#### Cooling System

- Jacket water thermostats and housing - full open temperature 98 °C (208 °F)
- Jacket Water pump - gear driven, centrifugal, non-self-priming
- Aftercooler water pump - gear driven, centrifugal, non-self-priming
- Aftercooler core - for treated water and sea air atmosphere
- Exhaust manifolds - watercooled
- Exhaust elbow - dry 203 mm (8 in)

#### Flywheels and Flywheel Housings

- Flywheel, SAE No. 14 or 18
- Flywheel housing, SAE No. 0
- SAE standard rotation

#### Control System

- ADEM™4 (A4) Engine Control Module (ECM)
- CSA Class 1, Division 2, Group D

#### Fuel System

- Gas pressure regulator
- Electronic carburetor
- Single gas shutoff

#### Lube System

- Crankcase breather – top mounted
- Oil cooler
- Oil filter - RH
- Oil filter in valve cover, dipstick - RH

#### Protection System

- ADEM™4 (A4) protection. The following includes alarm and shutdown
  - Inlet manifold air temperature
  - Inlet manifold air pressure
  - Oil pressure
  - Oil temperature
  - Coolant temperature
  - Engine speed (overspeed)

- Battery voltage
- Aftertreatment TWC inlet/outlet temperature
- Exhaust port temperature

#### General

- Crankshaft vibration damper and drive pulleys
- Lifting eyes
- Cylinder block inspection covers

#### Alternate Configuration w/o Controls and Aftertreatment

- Configured for installation of customer supplied AFR controls & aftertreatment

### Optional Equipment

#### Air Inlet System

- Precleaner
- Rain Cap

#### Charging Alternator

- 24 V, 65A CSA alternator

#### Exhaust System

- Exhaust flex fitting
- Exhaust elbow
- Exhaust flange - ANSI

#### Instrumentation

- Product Link™ cellular radio - external antenna
- Product Link™ cellular radio - internal antenna
- Product Link™ saradio - external antenna
- 8-inch HMI touch screen panel
- 15', 25', 50' interconnect harness

#### Starting System

- Air pressure regulator
- Air strt silencer
- Vane starter
- Electric starter
- Turbine starter

#### Torsional Vibration Analysis

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LEHW23828-00 (06-2026)  
(Global)

