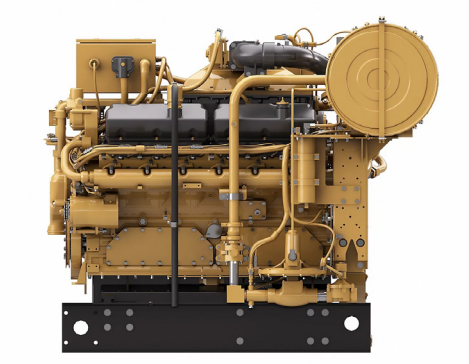


Image shown may not reflect actual configuration

Cat® CG137-12 GAS COMPRESSION ENGINE

The Cat® CG137-12 is a 24 L V-12 rich-burn gas engine delivering 448 bkW (600 bhp) at 1,800 rpm for gas-compression applications. Its field-proven cylinder-head design, improved fuel tolerance, ADEM A4 engine management, and Class I, Division 2 control architecture support dependable operation across varied field-gas conditions. With a customer-supplied three-way catalyst, the engine can be configured for NSPS and non-attainment-area emissions requirements.

Features and Benefits:

ENGINE DESIGN

- V-12, 24 L rich-burn platform delivers 448 bkW (600 bhp) at 1,800 rpm.
- Tough, field-proven cylinder-head design supports durability.
- Improved fuel tolerance accommodates a broad range of gaseous fuels.
- Customer-supplied three-way catalyst enables NSPS and non-attainment-area emissions capability.

MORE FUEL FLEXIBILITY

- Improved fuel tolerance and electronic fuel control allow the CG137-12 to operate across a broader range of gaseous fuels, helping operators use available site gas while maintaining stable compression performance.

CONTROL WITHOUT THE LAPTOP

- The 8-inch color touchscreen HMI supports ECM configuration, monitoring updates, service tests, histograms, screenshots, and status reports directly at the engine, helping technicians diagnose and adjust the package faster.

PROTECTION BUILT FOR CRITICAL SITES

- ADEM A4 monitors air, oil, coolant, speed, battery, and catalyst temperatures with alarm and shutdown protection, helping prevent abnormal conditions from becoming costly failures in continuous gas-compression service.

Specifications

Configuration	V-12, 4-Stroke-Cycle Gas	**Cooling System Capacity**	
Serial Prefix	SZ2	**Total**	82.6 L (22 gal)
Bore	137 mm (5.4 in)	**JW**	75 L (20 gal)
Stroke	152 mm (6.0 in)	**SCAC**	7.6 L (2 gal)
Displacement	24 L (1648 in^3)	**Lube Oil System (refill)**	170 L (45 gal)
Aspiration	Turbocharged-Aftercooled	**Oil Change Interval**	750 hours
Governor and Protection	Electronic (ADEM™ 4)	**Rotation (from flywheel end)**	Counterclockwise
Combustion	Rich Burn - Customer Supplied Catalyst	**Flywheel Teeth**	136

CG137-12 Gas Compression Engine

Technical Data

Performance Number	EM4986-01
Rating – % O_2	0.4
Engine Power – bkW (bhp)	448 (600)
Engine Speed – rpm	1800
Max Altitude @ Rated Torque and 38 °C (100 °F) – m (ft)	2438 (8000)
Speed Turndown @ Max Altitude, Rated Torque, and 38 °C (100 °F) – %	12
Aftercooler Temperature - Stage 1 (JW) – °C (°F)	99 (210)
Aftercooler Temperature - Stage 2 (SCAC) – °C (°F)	54 (130)
Emissions (NTE)*- NOx (as NO_2) – g/bkW-h (g/bhp-h)	15.15 (11.30)
Emissions (NTE)* - CO – g/bkW-h (g/bhp-h)	15.15 (11.30)
VOC– g/bkW-h (g/bhp-h)**	0.31 (0.23)
Fuel Consumption * (ISO) – MJ/bkW-h (btu/bhp-h)**	10.73 (7586)
Heat Balance - Heat Rejection to Jacket Water (JW) – kW (btu/min)	448 (25,486)
Heat Balance - Heat Rejection to Aftercooler – kW (btu/min)	28 (1604)
Heat Balance - Heat Rejection to Exhaust – LHV to 25 °C (77 °F) – kW (btu/min)	289 (16,451)
Exhaust System - Exhaust Gas Flow Rate – Engine Outlet – N*m³/min (scfm)	3.10 (2406)
Exhaust System - Exhaust Stack Temperature – Engine Outlet – °C (°F)	522 (972)

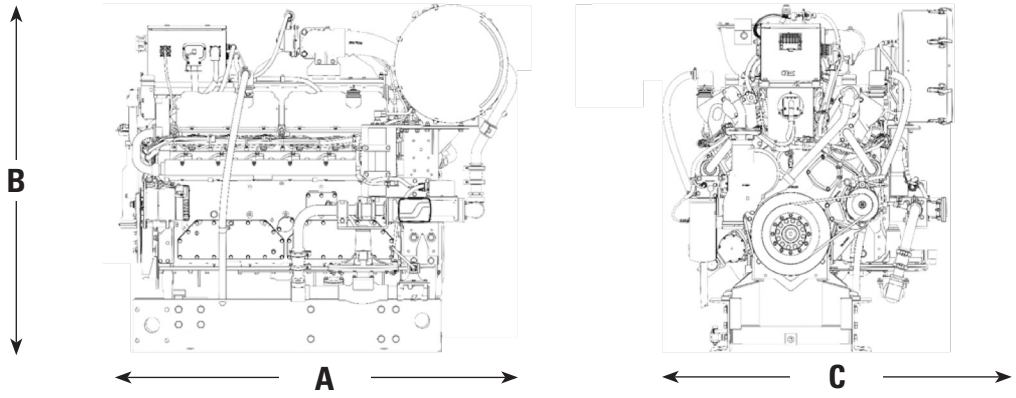
* at 100% load and speed, listed as not to exceed
** Volatile organic compounds as defined in U.S. EPA 40 CFR 60, subpart JJJJ
*** ISO 3046/1
**** For customer supplied AFR controls & aftertreatment contact supplier for performance and emissions data

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.



A	Length	2036.90 mm	80.19 in	**C**	Width	1515.10 mm	59.65 in
B	Height	1701.00 mm	66.97 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
- Single-element air cleaner with service indicator
- Air-inlet adapter with rain cap recommended for weather protection

Control System
- ADEM A4 ECM
- CSA Class I, Division 2, Group D
- Electronic fuel valve and integrated engine management acket-water thermostats and housing, full open at 98°C

Cooling System
- Jacket-water thermostats and housing, full open at 98°C
- Gear-driven centrifugal jacket-water and aftercooler pumps
- Aftercooler core for treated water and sea-air atmosphere
- Water-cooled exhaust manifolds

Exhaust System
- Dry 203 mm (8 in) exhaust elbow
- Water-cooled exhaust manifolds

Flywheels and Flywheel Housings
- SAE No. 14 or 18 flywheel
- SAE No. 0 flywheel housing
- SAE standard rotation

Fuel System
- Gas-pressure regulator
- Natural-gas carburetor
- Single gas shutoff
- Electronic fuel valve

Instrumentation
- 8-inch color touchscreen HMI
- ECM configuration, monitoring, service tests, histograms, screenshots, and status reports

Lube System
- Top-mounted crankcase breather
- Oil cooler
- RH oil filter
- Valve-cover oil fill and RH dipstict

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

Optional Equipment

Air Inlet System
- Precleaner
- Rain Cap

Control System
- 24 V / 65A CSA charging alternator

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

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

Power Take-Offs
- Front stub shafts
- Product Link™ cellular radio - internal antenna

Starting System
- Air pressure regulator
- Air start silencer
- Vane starter, Electric starter, Turbine starter

Torsional Vibration Analysis

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