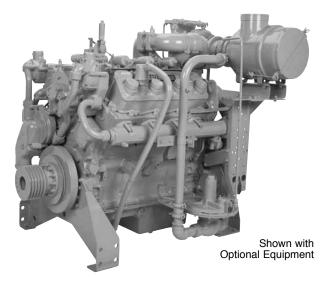
CATERPILLAR®

G3408 Gas Petroleum Engine

190-298 bkW (255-400 bhp) 1500 & 1800 rpm

2.0% O2 Rating



CAT® ENGINE SPECIFICATIONS

V-8, 4-Stroke-Cycle	
Bore	137 mm (5.4 in.)
Stroke	152 mm (6.0 in.)
Displacement	18 L (1099 cu. in.)
Aspiration	Naturally Aspirated or
Turb	ocharged-Aftercooled
Governor and Protection	Woodward PSG
Combustion	Rich Burn
Engine Weight, net dry (approx)	. 1678.3 kg (3700 lb)
Power Density 5	5.6 kg/kW (9.3 lb/bhp)
Power per Displacement	22.2 bhp/L
Engine only Cooling System Capaci	ty 54.9 L (14.5 gal)
Lube Oil System (refill)	46.2 L (12.2 gal)
Oil Change Interval	750 hours
Rotation (from flywheel end)	Counterclockwise
Flywheel and Flywheel Housing	SAE No. 0
Flywheel Teeth	136

FEATURES

Engine Design

- Improved reliability and durability
- Ability to burn a wide spectrum of gaseous fuels
- Robust diesel strength design prolongs life and lowers owning and operating costs
- Broad operating speed range

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.

Gas Engine Rating Pro

GERP is a PC-based program designed to provide site performance capabilities for Cat® natural gas engines for the gas compression industry. GERP provides engine data for your site's altitude, ambient temperature, fuel, engine coolant heat rejection, performance data, installation drawings, spec sheets, and pump curves.

Product Support Offered Through Global Cat Dealer Network

More than 2,200 dealer outlets

Cat factory-trained dealer technicians service every aspect of your petroleum engine

Cat parts and labor warranty

Preventive maintenance agreements available for repairbefore-failure options

S•O•SSM program matches your oil and coolant samples against Caterpillar set standards to determine:

- Internal engine component condition
- Presence of unwanted fluids
- Presence of combustion by-products
- Site-specific oil change interval

Over 80 Years of Engine Manufacturing Experience

Over 60 years of natural gas engine production

Ownership of these manufacturing processes enables Caterpillar to produce high quality, dependable products.

- Cast engine blocks, heads, cylinder liners, and flywheel housings
- Machine critical components
- Assemble complete engine

Web Site

For all your petroleum power requirements, visit www.catoilandgas.cat.com.

CATERPILLAR®

G3408

GAS PETROLEUM ENGINE

190-298 bkW (255-400 bhp)

STANDARD EQUIPMENT

Air Inlet System

Air cleaner — single element with service indicator

Control System

Governor - Woodward PSG mechanical Governor control - positive locking

Cooling System

Thermostats and housing Jacket water pump Aftercooler water pump Aftercooler core

Exhaust System

Watercooled exhaust manifolds Dry exhaust elbow

Flywheel & Flywheel Housing

SAE No. 0 flywheel SAE No. 0 flywheel housing SAE standard rotation

Fuel System

Gas pressure regulator Natural gas carburetor

Ignition System

Digital ignition system

Instrumentation

Service meter

Lube System

Crankcase breather — top mounted Oil cooler Oil filter - RH Auxiliary oil reservoir Rear sump oil pan

Oil filler in valve cover and dipstick - RH

Mounting System

Engine supports

Protection System

Shutoffs

General

Paint - Cat yellow Crankshaft vibration damper and drive pulleys Lifting eyes

OPTIONAL EQUIPMENT

Air Inlet System

Air cleaner - dual element Air inlet adapter Precleaner Air cleaner rain cap

Charging System

Battery chargers Charging alternators Ammeter gauge Ammeter gauge and wiring Control mounting

Control System

EG3P/2301A speed control governor PSG electric governor

PSG pneumatic governor

Cooling System

Radiators

Non-sparking blower fan

Blower fan and fan drives for customer supplied radiators

ATAAC conversion

Aftercooler Expansion tank

Heat exchanger

Exhaust System

Flexible fittings Elbows Flanges Rain caps Mufflers

Exhaust manifold

Fuel System

Dual gas regulator Low energy fuel carburetor Low pressure gas conversion Propane and natural gas valve and jet kits Fuel filter

Ignition System

CSA ignition

Ignition ground wiring harness Power supply - digital ignition system

Instrumentation

Gauges and instrument panels

Lube System

Auxiliary oil reservoir removal Lubricating oil

Mounting System

Vibration isolators

Power Take-Offs

Auxiliary drive pulleys Enclosed clutch Clutch support Front stub shaft Flywheel stub shaft Pulley removal

Protection System

Gas valves

Starting System

Air starting motor Electric air start control Air pressure regulator Air silencer Electric starting motor - single 24-volt

Starting aids

Battery sets (24-volt dry), cables, and rack



190-298 bkW (255-400 bhp)

TECHNICAL DATA

G3408 Gas Petroleum Engine - 1500 and 1800 rpm

		DM8633-01	TM9151-05	TM9213-04
Engine Power @ 100% Load @ 75% Load	bkW (bhp) bkW (bhp)	248 (332) 186 (249)	190 (255) 143 (191)	298 (400) 224 (300)
Engine Speed Max Altitude @ Rated Torque	rpm	1500	1800	1800
and 38°C (100°F) Speed Turndown @ Max Altitude,	m (ft)	914.4 (3000)	0	1219.2 (4000)
Rated Torque, and 38°C (100°F)	%	0	45	0
SCAC Temperature	°C (°F)	54 (130)	N/A	54 (130)
Emissions* NOx CO CO ₂ VOC**	g/bkW-hr (g/bhp-hr) g/bkW-hr (g/bhp-hr) g/bkW-hr (g/bhp-hr) g/bkW-hr (g/bhp-hr)	18.92 (14.11) 18.91 (14.10) 657 (490)	34.39 (25.64) 2 (1.5) 654 (488) .3 (.22)	35.23 (26.27) 2.15 (1.6) 616 (459) .21 (.16)
Fuel Consumption*** @ 100% Load @ 75% Load	MJ/bkW-hr (Btu/bhp-hr) MJ/bkW-hr (Btu/bhp-hr)	10.62 (7507) 11.14 (7874)	10.71 (7568) 11.64 (8225)	9.92 (7008) 10.40 (7350)
Heat Balance Heat Rejection to Jacket Water @ 100% Load @ 75% Load	bkW (Btu/min) bkW (Btu/min)	279.73 (15,922) 209.84 (11,944)	179 (10,169) 164 (9324)	253 (14,372) 217 (12,368)
Heat Rejection to Aftercooler @ 100% Load @ 75% Load	bkW (Btu/min) bkW (Btu/min)	4.36 (248) 1.74 (99)	N/A N/A	22.7 (1292) 14.5 (828)
Heat Rejection to Exhaust @ 100% Load @ 75% Load	bkW (Btu/min) bkW (Btu/min)	168.24 (9576) 121.07 (6891)	151 (8583) 114 (6501)	183 (10,382) 136 (7749)
Exhaust System Exhaust Gas Flow Rate @ 100% Load @ 75% Load	m³/min (cfm) m³/min (cfm)	38.37 (1355) 28.94 (1022)	34.57 (1221) 26.33 (930)	45.08 (1592) 34.43 (1216)
Exhaust Stack Temperature @ 100% Load @ 75% Load	°C (°F)	513.89 (957) 478.89 (894)	576 (1069) 565 (1050)	490 (914) 464 (867)
Intake System Air Inlet Flow Rate @ 100% Load @ 75% Load	m³/min (scfm) m³/min (scfm)	12.97 (458) 10.25 (362)	10.90 (385) 8.35 (295)	15.83 (559) 12.52 (442)
Gas Pressure	kPag (psig)	10.3-34.5 (1.5-5)	10.34-34.47 (1.5-5)	137.9-172.4 (20-25)

^{*}at 100% load and speed, all values are listed as not to exceed

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

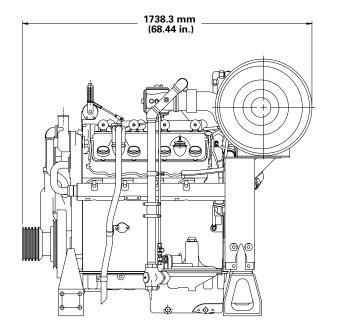
^{***}ISO 3046/1

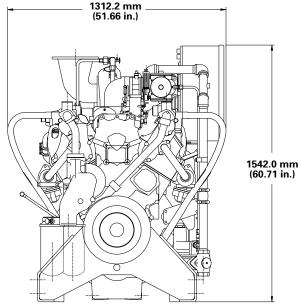
G3408

GAS PETROLEUM ENGINE

190-298 bkW (255-400 bhp)

GAS PETROLEUM ENGINE





PACKAGE DIMENSIONS				
Length	mm (in.)	1738.3 (68.44)		
Width	mm (in.)	1312.2 (51.66)		
Height	mm (in.)	1542.0 (60.71)		
Shipping Weight	kg (lb)	1678.3 (3700)		

Note: General configuration not to be used for installation. See general dimension drawings for detail.

Dimensions are in mm (inches).

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.

Materials and specifications are subject to change without notice. The International System of Units (SI) is used in this publication. CAT, CATERPILLAR, their respective logos, S•O•S, "Caterpillar Yellow" and the "Power Edge" trade dress, as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.