

## FEATURES

### ■ CAT® QUALITY THROUGHOUT

Cat® gas engines incorporate many of the same proven components as their diesel counterparts – including the block, crankshaft, main bearings, camshaft and connecting rods. However, by operating at 40 to 50% lower cylinder pressure and bearing loads than diesels, they offer the extra benefit of prolonged life. Caterpillar gas engines inherit more from their diesel counterparts than just strength. They are backed by the same support system recognized as one of the most sophisticated and dependable in the world.

### ■ APPLICATION FLEXIBILITY

Broad operating speed range and the ability to burn a wide spectrum of fuels.

### ■ LOW EMISSIONS

0.7 gram/hp hr NOx level at 1000 rpm.

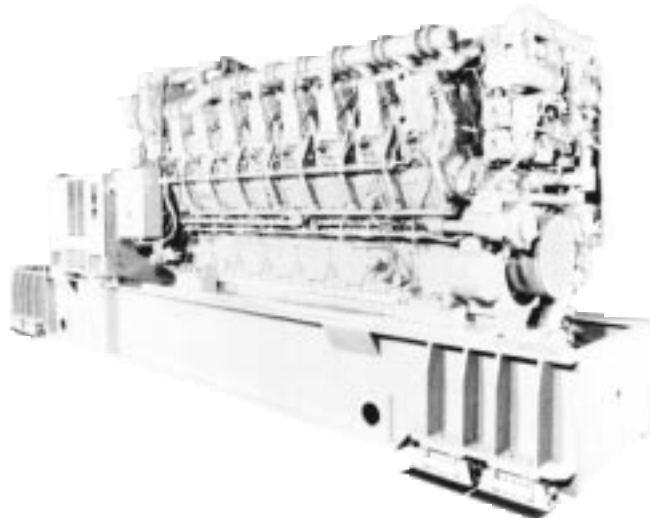
### ■ SUPERIOR TECHNOLOGY

Represent the latest technology in engine design. The engine is offered in a low emission turbocharged and aftercooled configuration only. This configuration offers:

- High energy ignition systems for consistent firing
- Highly efficient enriched prechamber design for complete combustion
- Modern component design such as deep cup, oil gallery piston
- Electronic controls to optimize performance

### ■ RESULT

Low emissions and BSFC under all operating conditions.



Shown with  
Optional Equipment

## STANDARD EQUIPMENT

### General

Aftercooler  
Crankcase explosion doors  
Engine barring device  
Flywheel and ring gear  
High efficiency turbos  
Protective guards  
Torsional vibration damper

### Cooling System

Expansion tank  
Jacket water heater  
Jacker water pump  
Separate circuit gear driven pump for aftercooler/oil cooler circuit  
Water regulators  
87°C (189°F)

### Ignition System

Altronic III ignition with variable timing

### Controls

Electronic supervisory system:  
air/fuel ratio control  
governing  
timing optimization  
Instrument panel to monitor:  
crankcase pressure  
engine speed  
exhaust temperature  
intake manifold pressure  
intake manifold temperature  
oil pressure and temperature

oil pressure  
differential  
service meter hours  
water temperature

### Fuel System

Fuel filter  
Shipped loose gas  
pressure regulator

### Protection

Detonation sensing and compensation  
Misfire sensing  
Energized to run shutdowns for:  
crankcase pressure  
engine overspeed  
oil pressure  
water pressure

### Lube Oil System

Engine mounted lube oil cooler  
Engine mounted lube oil filters  
Gear driven lube oil pump  
Prelube/postlube system  
Sump pump connections

### Air Intake System

Installed turbo air inlet adapters  
Shipped loose air cleaners

### Optional Equipment

Caterpillar installed generators  
Generator set base

**SPECIFICATIONS**

16 Cylinder  
 Bore—mm (in) . . . . . 300 (11.81)  
 Stroke—mm (in) . . . . . 300 (11.81)  
 Displacement—L (cu in) . . . . . 331 (20,700)  
 Compression Ratio . . . . . 9.2:1

**GENERATOR AND GENERATOR ATTACHMENTS**  
 Caterpillar generator sets are available with a variety of generators, matched by Caterpillar. The description here is typical.

Available voltages include: 400, 3300, 6600, 11000.

Brushless revolving field generator with rotating brushless exciter. 90° C rise over 40° C ambient for use up to 1000 meters altitude. Insulation Class F. Open drip proof IP23 construction with terminal box sealed to IP44. Output six leads in terminal box designed for bottom entry cables. Includes two self-lubricated sleeve bearings, 100 ohm RTDs, two per phase in stator and one per bearing. Electrical features include voltage regulator with three phase sensing, cross current compensation, underfrequency protection with automatic reset, voltz per hertz operation, overvoltage protection with manual reset, permanent magnet exciter, space heaters installed with thermostat, 96% minimum efficiency at .8 power factor.

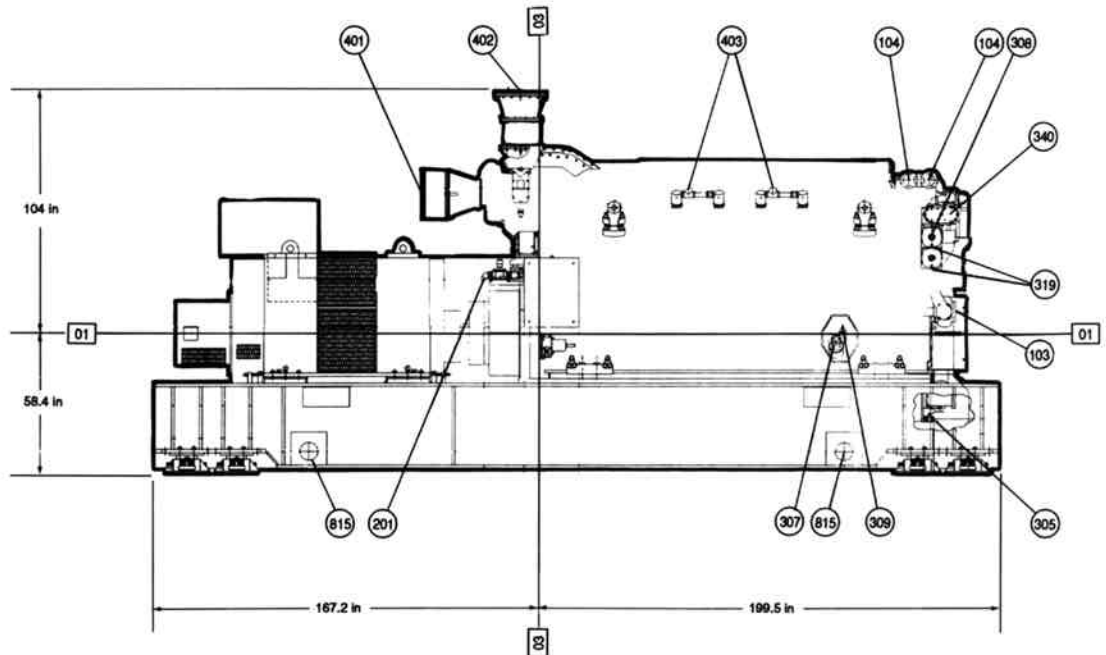
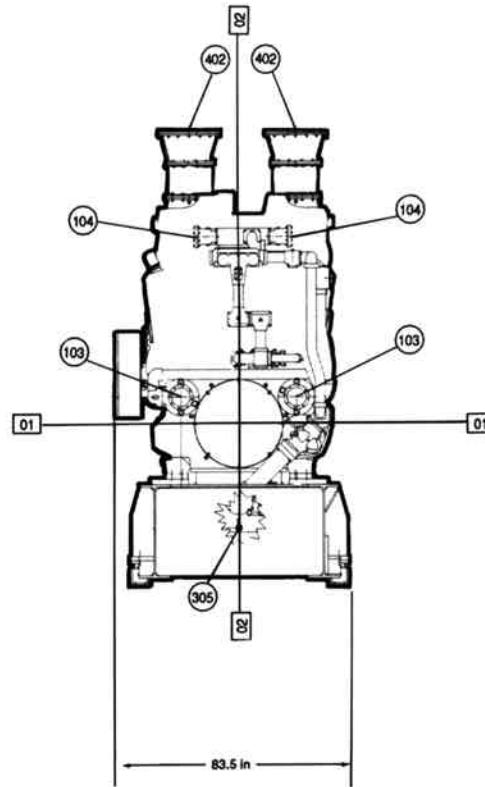
**TECHNICAL DATA**

G3616 Gas Engine Generator Set			Continuous	
			TA 90 LE	TA 130 LE
<b>Rating Information</b>	Electrical Output @ 0.8 PF without Fan	kW	3,385	3,195
	Voltage	V	400	400
	Compression Ratio		9.2	9.2
<b>Package Dimensions</b>	Min Gas Pressure Required	psi	45	45
	Shipping Weight w/ Generator and Base	lb	141,840	141,840
	Gen Set Length	in	366.7	366.7
	Gen Set Width	in	83.5	83.5
<b>Engine Performance Data @ Rated Conditions</b>	Fuel Consumption (100% load)	Btu/hp-hr	6,650	6,700
	Fuel Consumption (75% load)	Btu/hp-hr	6,922	6,925
	Air Inlet Flow Rate	scfm	12,860	11,999
	Exhaust Gas Flow Rate @ Stack Temp	cfm	30,755	28,797
	Heat Rejection to Jacket Water (total)	Btu/min	47,464	48,395
	Heat Rejection to Exhaust (to 350°)	Btu/min	117,723	110,902
	Heat Rejection to Aftercooler	Btu/min	38,384	32,172
	Heat Rejection to Atmosphere from Engine	Btu/min	20,337	21,343
Exhaust Gas Stack Temperature	Deg. F	831	835	

90 refers to aftercooler water inlet temperature in °F (32°C).  
 130 refers to aftercooler water inlet temperature in °F (54°C).

All data is based on standard conditions.  
 These ratings do not allow for overload capability.

- 01 Centerline of crankshaft
- 02 Centerline of engine
- 03 Rear face of cylinder block
- 103 Water Inlet
- 104 Water Outlet
- 305 Oil Drain
- 307 Oil Filler
- 308 Oil Filter
- 309 Oil Level Gauge
- 401 Air Inlet
- 402 Exhaust
- 403 Breather Outlet
- 815 Lifting Location



Note: General configuration not to be used for installation.

## CONDITIONS AND DEFINITIONS

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**Ratings** are based on SAE J1349 standard conditions of 100 kPa (26.61 in Hg) and 25°C (77°F); ISO 3046, DIN 6271, BS 5514 standard conditions of 100 kPa (29.61 in Hg), 27°C (81°F), and API 7B-11C standard conditions of 99 kPa (29.38 in Hg), 29°C (85°F) also apply.

Ratings are based on dry natural gas having a low heat value of 35.22 MJ/m<sup>3</sup> (905 btu/ft<sup>3</sup>). Variations in altitude, temperature and gas composition from standard conditions may require a reduction in engine horsepower.

Turbocharged-aftercooled ratings apply to 1525 m (5,000 ft) and 25°C (77°F). For applications which exceed these limits contact your Caterpillar dealer.