

# OLYMPIAN™

G250LG4 250 kW

## G250LG4

### 12.9L

## Industrial Spark-Ignited Generator Set

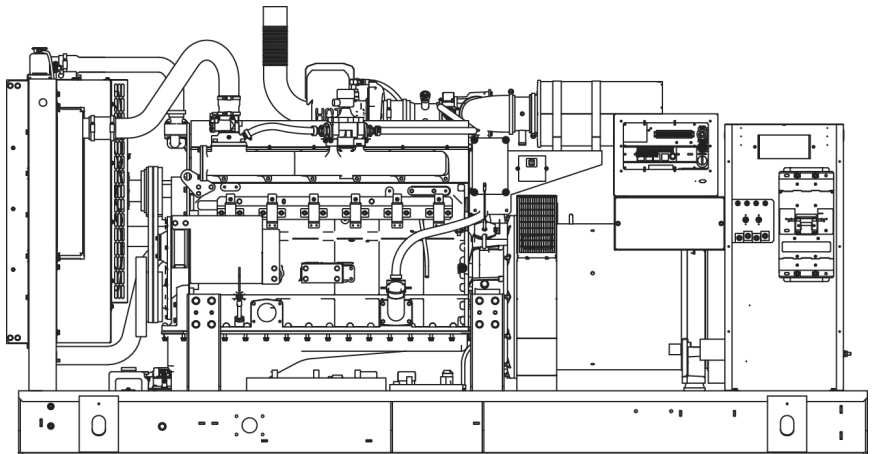
EPA Certified Stationary Emergency

Standby Power Rating  
**250 kW 313 kVA 60 Hz**

Prime Power Rating\*  
**225 kW 281 kVA 60 Hz**



\*Built in the USA using domestic and foreign parts



\*EPA Certified Prime ratings are not available in the U.S. or its Territories

Image used for illustration purposes only

## Codes and Standards

Olympian products are designed to the following standards:



UL2200, UL508, UL142, UL498



NFPA70, 99, 110, 37



NEC700, 701, 702, 708



ISO9001, 8528, 3046, 7637, Pluses #2b, 4



NEMA ICS10, MG1, 250, ICS6, AB1



ANSI C62.41

American National Standards Institute



IBC 2009, CBC 2010, IBC 2012, ASCE 7-05, ASCE 7-10, ICC-ES AC-156 (2012)

Prime power or standby service, Olympian Natural gas or Propane fuel generator sets deliver dependable, clean, economical power – even in the most demanding conditions – and Olympian gensets are available in a wide range of configurations with optional equipment.

Olympian generator sets are designed, engineered and manufactured for optimal performance. All major components are tested individually; once assembled, the entire unit is tested at and above 100% of rated load for safety and operation.

These complete, ready-to-run packages have another distinct advantage. They all come with the comprehensive service and support of Cat® dealers – beginning with prompt delivery and ongoing support throughout the life of the generator set.

# OLYMPIAN™

## LG Series

### Standard Features

#### ENGINE SYSTEM

##### General

- Oil Drain Extension
- Air Cleaner
- Fan Guard
- Stainless Steel flexible exhaust connection
- Critical Exhaust Silencer
- Factory Filled Oil
- Radiator duct adapter (open set only)

##### Fuel System

- Primary and Secondary Fuel Shutoff
- Flexible Fuel Line - NPT Connection

##### Cooling System

- Closed Coolant Recovery System
- UV/Ozone resistant hoses
- Factory-installed Radiator
- Radiator drain extension
- 50/50 Ethylene glycol antifreeze

##### Engine Electrical System

- Battery charging alternator
- Battery Cables
- Battery Tray
- Solenoid activated starter motor
- Rubber-booted engine electrical connections

#### ALTERNATOR SYSTEM

- Class H insulation material
- 2/3 Pitch
- Skewed Stator
- Permanent Magnet Excitation
- Sealed Bearings
- Amortisseur winding
- Full load capacity alternator

#### GENERATOR SET

- Internal Genset Vibration Isolation
- Separation of circuits - high/low voltage
- Separation of circuits - multiple breakers
- Wrapped Exhaust Piping
- Standard Factory Testing
- 2 Year Limited Warranty (Standby rated Units)
- 1 Year Warranty (Prime rated units)
- Silencer mounted in the discharge hood (enclosed only)

#### ENCLOSURE (if selected)

- Rust-proof fasteners with nylon washers to protect finish
- High performance sound-absorbing material
- Gasketed doors
- Stamped air-intake louvers
- Air discharge hoods for radiator-upward pointing
- Stainless steel lift off door hinges
- Stainless steel lockable handles

### CONTROL SYSTEM



#### Control Panel

- Digital H Control Panel - Dual 4x20 Display
- Programmable Crank Limiter
- 7-Day Programmable Exerciser
- Special Applications Programmable PLC
- RS-232/485
- All-Phase Sensing DVR
- Full System Status
- Utility Monitoring
- Low Fuel Pressure Indication
- 2-Wire Start Compatible
- Power Output (kW)
- Power Factor
- kW Hours, Total & Last Run

- Real/Reactive/Apparent Power
- All Phase AC Voltage
- All Phase Currents
- Oil Pressure
- Coolant Temperature
- Coolant Level
- Engine Speed
- Battery Voltage
- Frequency
- Date/Time Fault History (Event Log)
- Isochronous Governor Control
- Waterproof/sealed Connectors
- Audible Alarms and Shutdowns
- Not in Auto (Flashing Light)
- Auto/Off/Manual Switch
- E-Stop (Red Mushroom-Type)
- NFPA110 Level I and II (Programmable)
- Customizable Alarms, Warnings, and Events
- Modbus protocol
- Predictive Maintenance algorithm
- Sealed Boards
- Password parameter adjustment protection

- Single point ground
- 15 channel data logging
- 0.2 msec high speed data logging
- Alarm information automatically comes up on the display

#### Alarms

- Oil Pressure (Pre-programmable Low Pressure Shutdown)
- Coolant Temperature (Pre-programmed High Temp Shutdown)
- Coolant Level (Pre-programmed Low Level Shutdown)
- Low Fuel Pressure Alarm
- Engine Speed (Pre-programmed Over speed Shutdown)
- Battery Voltage Warning
- Alarms & warnings time and date stamped
- Alarms & warnings for transient and steady state conditions
- Snap shots of key operation parameters during alarms & warnings
- Alarms and warnings spelled out (no alarm codes)

## LG Series

### Configurable Options

#### ENGINE SYSTEM

- General
- Engine Block Heater
  - Oil Heater
  - Air Filter Restriction Indicator
  - Stone Guard (Open Set Only)

#### Engine Electrical System

- 10A UL battery charger
- 2.5A UL battery charger
- Battery Warmer

#### ALTERNATOR SYSTEM

- Alternator Upsizing
- Anti-Condensation Heater
- Tropical coating

#### GENERATOR SET

- Extended Factory Testing (3 Phase Only)
- IBC Seismic Certification
- 8 Position Load Center
- 2 Year Extended Warranty
- 5 Year Warranty
- 5 Year Extended Warranty

#### CIRCUIT BREAKER OPTIONS

- Main Line Circuit Breaker
- 2nd Main Line Circuit Breaker
- Shunt Trip and Auxiliary Contact
- Electronic Trip Breakers

#### ENCLOSURE

- Standard Enclosure
- Level 1 Sound Attenuation
- Level 2 Sound Attenuation
- Steel Enclosure
- Aluminum Enclosure
- 150 MPH Wind Kit
- 12 VDC Enclosure Lighting Kit
- 120 VAC Enclosure Lighting Kit
- AC/DC Enclosure Lighting Kit
- Door Alarm Switch

#### CONTROL SYSTEM

- |  |  |  |
|--|--|--|
| <ul style="list-style-type: none"> <li><input type="checkbox"/> 21-Light Remote Annunciator</li> <li><input type="checkbox"/> Remote Relay Panel (8 or 16)</li> <li><input type="checkbox"/> Oil Temperature Sender with Indication Alarm</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> Remote E-Stop (Break Glass-Type, Surface Mount)</li> <li><input type="checkbox"/> Remote E-Stop (Red Mushroom-Type, Surface Mount)</li> <li><input type="checkbox"/> Remote E-Stop (Red Mushroom-Type, Flush Mount)</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> Remote Communication - Modem</li> <li><input type="checkbox"/> Remote Communication - Ethernet</li> <li><input type="checkbox"/> 10A Run Relay</li> <li><input type="checkbox"/> Ground fault indication and protection functions</li> </ul> |
|--|--|--|

### Engineered Options

#### ENGINE SYSTEM

- Coolant heater ball valves
- Fluid containment pans

#### ALTERNATOR SYSTEM

- 3rd Breaker Systems

#### GENERATOR SET

- Special Testing
- Battery Box

#### ENCLOSURE

- Motorized Dampers
- Enclosure Ambient Heaters

#### CONTROL SYSTEM

- Spare inputs (x4) / outputs (x4) - H Panel Only
- Battery Disconnect Switch

### Rating Definitions

**Standby** – Applicable for a varying emergency load for the duration of a utility power outage with no overload capability.

**Prime** – Applicable for supplying power to a varying load in lieu of utility for an unlimited amount of running time. A 10% overload capacity is available for 1 out of every 12 hours. The Prime Power option is only available on International applications.

Power ratings in accordance with ISO 8528-1, Second Edition dated 2005-06-01, definitions for Prime Power (PRP) and Emergency Standby Power (ESP).

**ENGINE SPECIFICATIONS****General**

Cylinder #	6
Type	In-line
Displacement - L (Cu In)	12.88 (785.99)
Bore - mm (in)	135 (5.31)
Stroke - mm (in)	150 (5.91)
Compression Ratio	10.92:1
Intake Air Method	Turbocharged/Aftercooled
Number of Main Bearings	7
Connecting Rods	Carbon Steel
Cylinder Head	Cast Iron GT250, OHV
Cylinder Liners	Ductile Iron
Ignition	Altronic CD1
Pistons	Aluminum
Crankshaft	Ductile Iron
Lifter Type	Solid
Intake Valve Material	Special Heat-Resistant Steel
Exhaust Valve Material	Alloy Steel, High Temp
Hardened Valve Seats	Alloy Steel, High Temp

**Engine Governing**

Governor	Electronic
Frequency Regulation (Steady State)	+/- 0.25%

**Lubrication System**

Oil Pump Type	Gear
Oil Filter Type	Full-flow Cartridge
Crankcase Capacity - L (qts)	34.3 (36.2)

**Cooling System**

Cooling System Type	Pressurized Closed Recovery
Water Pump Flow - gpm (lpm)	79 (299)
Fan Type	Pusher
Fan Speed (rpm)	1894
Fan Diameter mm (in)	762 (30)
Coolant Heater Wattage	2000
Coolant Heater Standard Voltage	240 V

**Fuel System**

Fuel Type	Natural Gas
Carburetor	Down Draft
Secondary Fuel Regulator	Standard
Fuel Shut Off Solenoid	Standard
Operating Fuel Pressure (Standard)	11" - 15" H <sub>2</sub> O
Operating Fuel Pressure (Optional)	7" - 15" H <sub>2</sub> O

**Engine Electrical System**

System Voltage	24 VDC
Battery Charging Alternator	Standard
Battery Size	See Battery Index 0161970SBY
Battery Voltage	(2) 12 VDC
Ground Polarity	Negative

**ALTERNATOR SPECIFICATIONS**

Standard Model	520
Poles	4
Field Type	Revolving
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion	<5%
Telephone Interference Factor (TIF)	< 50
Standard Excitation	Permanent Magnet
Bearings	Sealed Ball
Coupling	Direct, Flexible Disc
Prototype Short Circuit Test	Yes

Voltage Regulator Type	Full Digital
Number of Sensed Phases	3
Regulation Accuracy (Steady State)	+/- 0.25%

## LG Series

## operating data

### POWER RATINGS

	Natural Gas	
Three-Phase 120/208 VAC @0.8pf	250 kW	Amps: 867
Three-Phase 120/240 VAC @0.8pf	250 kW	Amps: 752
Three-Phase 277/480 VAC @0.8pf	250 kW	Amps: 376
Three-Phase 346/600 VAC @0.8pf	250 kW	Amps: 301

### STARTING CAPABILITIES (sKVA)

		sKVA vs. Voltage Dip											
		480 VAC						208/240 VAC					
Alternator	kW	10%	15%	20%	25%	30%	35%	10%	15%	20%	25%	30%	35%
Standard	250	263	395	527	658	790	922	197	296	395	494	593	692
Upsize 1	300	303	454	605	757	908	1059	227	341	454	568	681	794

### FUEL CONSUMPTION RATES\*

Natural Gas – ft <sup>3</sup> /hr (m <sup>3</sup> /hr)	
Percent Load	Standby
25%	1044 (29.6)
50%	1790 (50.7)
75%	2417 (68.4)
100%	2983 (84.5)

\*Fuel supply installation must accommodate fuel consumption rates at 100% load.

### COOLING

		Standby
Air Flow (inlet air combustion and radiator)	ft <sup>3</sup> /min (m <sup>3</sup> /min)	10,078 (285.4)
Coolant Flow per Minute	gpm (lpm)	79 (299)
Coolant System Capacity	gal (L)	19 (71.9)
Heat Rejection to Coolant	BTU/hr	788,204
Max. Operating Air Temp on Radiator	°F (°C)	122 (50)
Max. Operating Ambient Temperature (Before Derate)	°F (°C)	104 (40)
Maximum Radiator Backpressure	in H <sub>2</sub> O	0.5

### COMBUSTION AIR REQUIREMENTS

	Standby
Flow at Rated Power cfm (m <sup>3</sup> /min)	453 (12.8)

### ENGINE

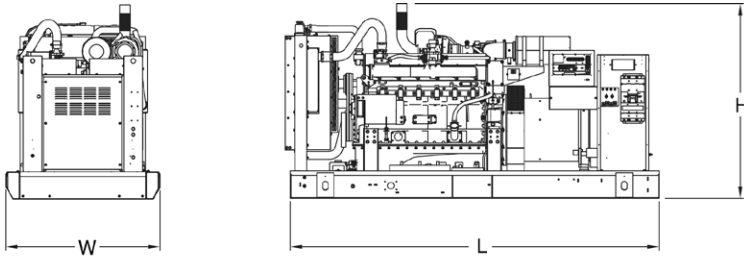
		Standby
Rated Engine Speed	rpm	1800
Horsepower at Rated kW**	hp	453
Piston Speed	ft/min (m/min)	1773 (540)
BMEP	psi	224

\*\* Refer to "Emissions Data Sheet" for maximum bHP for EPA and SCAQMD permitting purposes.

### EXHAUST

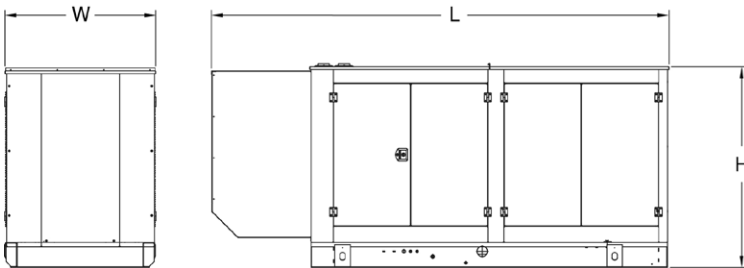
		Standby
Exhaust Flow (Rated Output)	cfm (m <sup>3</sup> /min)	1602 (45.4)
Maximum Recommended Back Pressure	inHg	1.5
Exhaust Temp (Rated Output)	°F (°C)	1450 (788)
Exhaust Outlet Size (Open Set)	in	3.5" I.D. Flex (No Muffler)

Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions. Please consult a CAT® Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528 and DIN6271 standards.



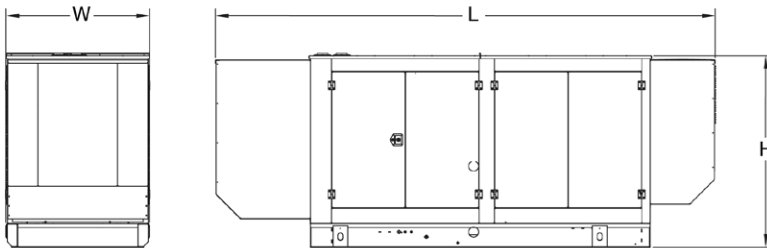
### OPEN SET (Includes Exhaust Flex)

L x W x H in (mm)	138.74 (3524.1) x 57.6 (1463.1) x 68.04 (1728.3)
Weight lbs (kg)	6364 (2887)
Sound Level (dBA*)	85.6



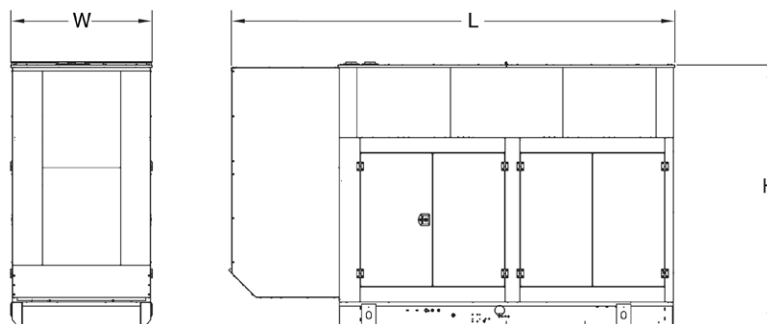
### STANDARD ENCLOSURE

L x W x H in (mm)	174.7 (4437.4) x 52.98 (1345.7) x 77.8 (1976.1)
Weight lbs (kg)	Steel: 7538 (3420) Aluminum: 6765 (3069)
Sound Level (dBA*)	82.9



### LEVEL 1 ACOUSTIC ENCLOSURE

L x W x H in (mm)	200.19 (5084.7) x 57.49 (1460.4) x 77.80 (1976.1)
Weight lbs (kg)	Steel: 8094 (3672) Aluminum: 6955 (3155)
Sound Level (dBA*)	77.8



### LEVEL 2 ACOUSTIC ENCLOSURE

L x W x H in (mm)	180.65 (4588.4) x 57.49 (1460.4) x 107.3 (2725.4)
Weight lbs (kg)	Steel: 8656 (3927) Aluminum: 7156 (3246)
Sound Level (dBA*)	72.3

\*All measurements are approximate and for estimation purposes only. Sound levels measured at 23 ft (7 m) and does not account for ambient site conditions.