

OLYMPIAN™

G175LG4 175 kW

G175LG4

Industrial Spark-Ignited Generator Set

EPA Certified Stationary Emergency

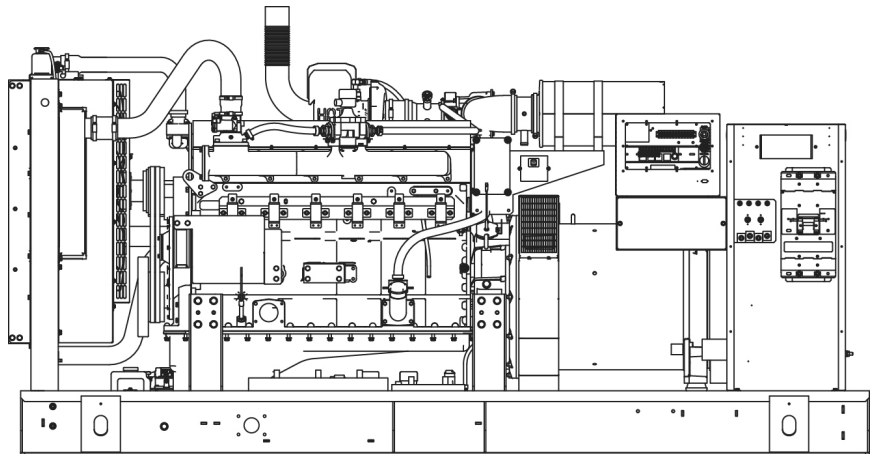
12.9L

Standby Power Rating
175 kW 219 kVA 60 Hz

Prime Power Rating*
158 kW 197 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"> <input type="checkbox"/> 21-Light Remote Annunciator <input type="checkbox"/> Remote Relay Panel (8 or 16) <input type="checkbox"/> Oil Temperature Sender with Indication Alarm | <ul style="list-style-type: none"> <input type="checkbox"/> Remote E-Stop (Break Glass-Type, Surface Mount) <input type="checkbox"/> Remote E-Stop (Red Mushroom-Type, Surface Mount) <input type="checkbox"/> Remote E-Stop (Red Mushroom-Type, Flush Mount) | <ul style="list-style-type: none"> <input type="checkbox"/> Remote Communication - Modem <input type="checkbox"/> Remote Communication - Ethernet <input type="checkbox"/> 10A Run Relay <input type="checkbox"/> Ground fault indication and protection functions |
|--|--|--|

Engineered Options

ENGINE SYSTEM

- Coolant heater ball valves
- Fluid containment pans

GENERATOR SET

- Special Testing
- Battery Box

CONTROL SYSTEM

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

ALTERNATOR SYSTEM

- 3rd Breaker Systems

ENCLOSURE

- Motorized Dampers
- Enclosure Ambient Heaters

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 ₂ O |
| Operating Fuel Pressure (Optional) | 7" - 15" H ₂ 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 | |
|---------------------------------|-------------|-----------|
| Single-Phase 120/240 VAC @1.0pf | 175 kW | Amps: 729 |
| Three-Phase 120/208 VAC @0.8pf | 175 kW | Amps: 607 |
| Three-Phase 120/240 VAC @0.8pf | 175 kW | Amps: 526 |
| Three-Phase 277/480 VAC @0.8pf | 175 kW | Amps: 263 |
| Three-Phase 346/600 VAC @0.8pf | 175 kW | Amps: 210 |

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 | 175 | 187 | 280 | 373 | 467 | 560 | 653 | 140 | 210 | 280 | 350 | 420 | 490 |
| Upsize 1 | 200 | 187 | 280 | 373 | 467 | 560 | 653 | 140 | 210 | 280 | 350 | 420 | 490 |
| Upsize 2 | 250 | 263 | 395 | 527 | 658 | 790 | 922 | 197 | 296 | 395 | 494 | 593 | 692 |

FUEL CONSUMPTION RATES*

| Natural Gas – ft ³ /hr (m ³ /hr) | |
|--|-------------|
| Percent Load | Standby |
| 25% | 819 (23.2) |
| 50% | 1404 (39.8) |
| 75% | 1895 (53.7) |
| 100% | 2340 (66.3) |

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

COOLING

| | | Standby |
|--|--|--------------|
| Air Flow (inlet air combustion and radiator) | ft ³ /min (m ³ /min) | 9389 (265.9) |
| Coolant Flow per Minute | gpm (lpm) | 79 (299) |
| Coolant System Capacity | gal (L) | 6.1 (23.1) |
| Heat Rejection to Coolant | BTU/hr | 597,740 |
| Max. Operating Air Temp on Radiator | °F (°C) | 122 (50) |
| Max. Operating Ambient Temperature (Before Derate) | °F (°C) | 110 (43.3) |
| Maximum Radiator Backpressure | in H ₂ O | 0.5 |

COMBUSTION AIR REQUIREMENTS

| | Standby |
|---|------------|
| Flow at Rated Power cfm (m ³ /min) | 389 (11.0) |

ENGINE

| | | Standby |
|--------------------------|----------------|------------|
| Rated Engine Speed | rpm | 1800 |
| Horsepower at Rated kW** | hp | 267 |
| Piston Speed | ft/min (m/min) | 1773 (540) |
| BMEP | psi | 157 |

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

EXHAUST

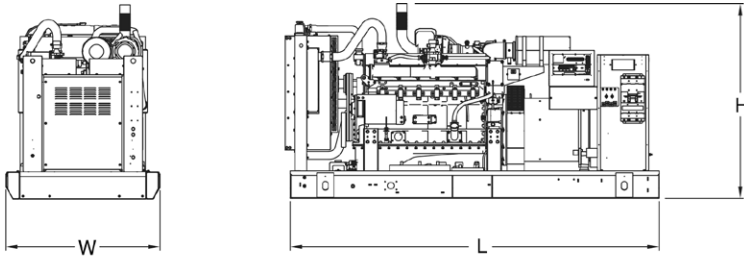
| | | Standby |
|-----------------------------------|---------------------------|-----------------------------|
| Exhaust Flow (Rated Output) | cfm (m ³ /min) | 1349 (38.2) |
| Maximum Recommended Back Pressure | inHg | 1.5 |
| Exhaust Temp (Rated Output) | °F (°C) | 1378 (748) |
| Exhaust Outlet Size (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.

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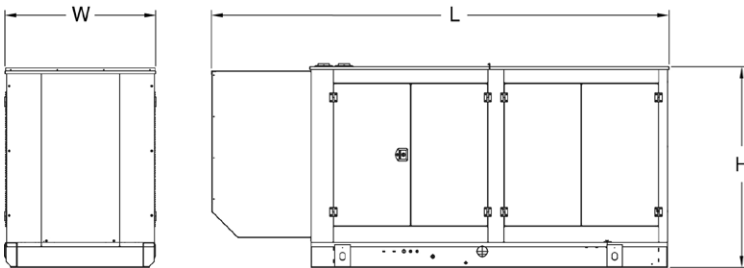
LG Series

dimensions, weights, and sound levels



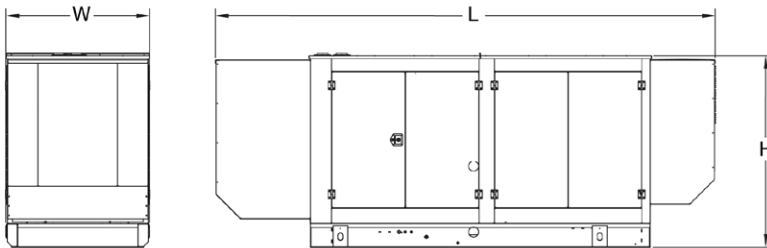
OPEN SET (Includes Exhaust Flex)

| | |
|--------------------|---|
| L x W x H in (mm) | 127.95 (3250) x 52.93 (1344.5) x 67.37 (1711.2) |
| Weight lbs (kg) | 5756 (2610.9) |
| Sound Level (dBA*) | 82.5 |



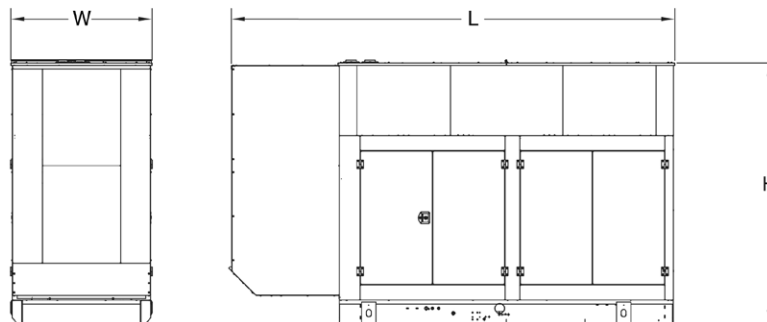
STANDARD ENCLOSURE

| | |
|--------------------|---|
| L x W x H in (mm) | 153.89 (3909) x 52.73 (1339.3) x 69.67 (1769.6) |
| Weight lbs (kg) | Steel: 6577 (2983) Aluminum: 6035 (2738) |
| Sound Level (dBA*) | 79.9 |



LEVEL 1 ACOUSTIC ENCLOSURE

| | |
|--------------------|---|
| L x W x H in (mm) | 180.11 (4574.7) x 52.73 (1339.3) x 69.67 (1769.6) |
| Weight lbs (kg) | Steel: 6990 (3171) Aluminum: 6176 (2801) |
| Sound Level (dBA*) | 75.7 |



LEVEL 2 ACOUSTIC ENCLOSURE

| | |
|--------------------|---|
| L x W x H in (mm) | 154.45 (3922.9) x 53.96 (1370.6) x 93.40 (2372.3) |
| Weight lbs (kg) | Steel: 7236 (3282) Aluminum: 6259 (2839) |
| Sound Level (dBA*) | 70.8 |

*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.