

SG200

14.2L

Industrial Spark-Ignited Generator Set

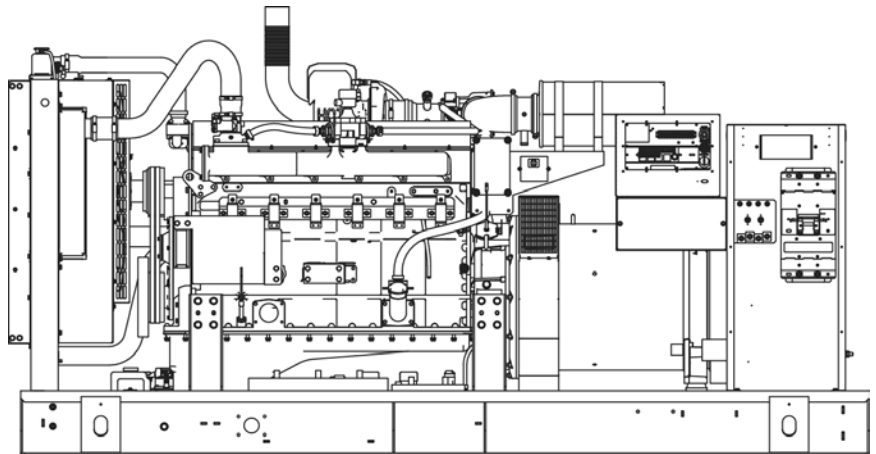
EPA Certified Stationary Emergency

Standby Power Rating
200 kW 250 kVA 60 Hz

Prime Power Rating*
180 kW 225 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

Generac 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



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

Powering Ahead

For over 50 years, Generac has led the industry with innovative design and superior manufacturing.

Generac ensures superior quality by designing and manufacturing most of its generator components, including alternators, enclosures and base tanks, control systems and communications software.

Generac's gensets utilize a wide variety of options, configurations and arrangements, allowing us to meet the standby power needs of practically every application.

Generac searched globally to ensure the most reliable engines power our generators. We choose only engines that have already been proven in heavy-duty industrial application under adverse conditions.

Generac is committed to ensuring our customers' service support continues after their generator purchase.

SG200

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

- UL2200 GENprotect™
- 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
- Rhino Coat™ - Textured polyester powder coat

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)

SG200

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

- Gen-Link Communications Software (English Only)
- Extended Factory Testing (3 Phase Only)
- 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).

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application and engineering data

ENGINE SPECIFICATIONS

General

| | |
|--------------------------|------------------------------|
| Make | Generac |
| Cylinder # | 6 |
| Type | In-line |
| Displacement - L (Cu In) | 14.17 (864.71) |
| Bore - mm (in) | 135 (5.31) |
| Stroke - mm (in) | 165 (6.50) |
| Compression Ratio | 9.5:1 |
| 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) | 94 (356) |
| 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 (Dual) |
| Operating Fuel Pressure (Standard) | 7" - 11" 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% |

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operating data

POWER RATINGS

| | Natural Gas | |
|---------------------------------|-------------|-----------|
| Single-Phase 120/240 VAC @1.0pf | 200 kW | Amps: 833 |
| Three-Phase 120/208 VAC @0.8pf | 200 kW | Amps: 694 |
| Three-Phase 120/240 VAC @0.8pf | 200 kW | Amps: 601 |
| Three-Phase 277/480 VAC @0.8pf | 200 kW | Amps: 301 |
| Three-Phase 346/600 VAC @0.8pf | 200 kW | Amps: 241 |

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 | 200 | 187 | 280 | 373 | 467 | 560 | 653 | 140 | 210 | 280 | 350 | 420 | 490 |
| Upsize 1 | 250 | 263 | 395 | 527 | 658 | 790 | 922 | 197 | 296 | 395 | 494 | 593 | 692 |
| Upsize 2 | 300 | 303 | 454 | 605 | 757 | 908 | 1059 | 227 | 341 | 454 | 568 | 681 | 794 |

FUEL CONSUMPTION RATES*

| Natural Gas – ft ³ /hr (m ³ /hr) | |
|--|-------------|
| Percent Load | Standby |
| 25% | 900 (25.5) |
| 50% | 1543 (43.7) |
| 75% | 2083 (59.0) |
| 100% | 2571 (72.8) |

*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) | 9432 (267) |
| Coolant System Capacity | gal (L) | 6.1 (23.1) |
| Heat Rejection to Coolant | BTU/hr | 670,280 |
| 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 ₂ O | 0.5 |

COMBUSTION AIR REQUIREMENTS

| | Standby |
|---|------------|
| Flow at Rated Power cfm (m ³ /min) | 432 (12.2) |

ENGINE

| | | Standby |
|--------------------------|----------------|------------|
| Rated Engine Speed | rpm | 1800 |
| Horsepower at Rated kW** | hp | 304 |
| Piston Speed | ft/min (m/min) | 1949 (594) |
| BMEP | psi | 179 |

EXHAUST

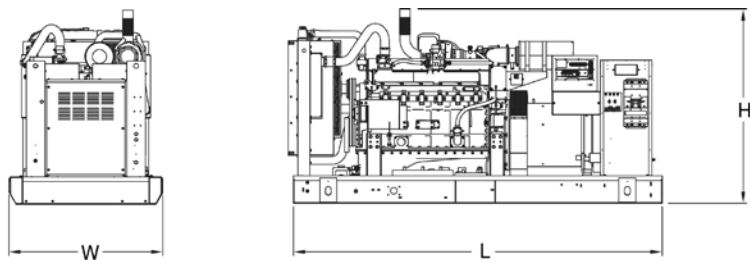
| | | Standby |
|-----------------------------------|---------------------------|-----------------------------|
| Exhaust Flow (Rated Output) | cfm (m ³ /min) | 1499 (42.4) |
| Max. Backpressure (Post Silencer) | inHg | 0.75 |
| Exhaust Temp (Rated Output) | °F (°C) | 1384 (751) |
| Exhaust Outlet Size (Open Set) | in | 3.5" I.D. Flex (No Muffler) |

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

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

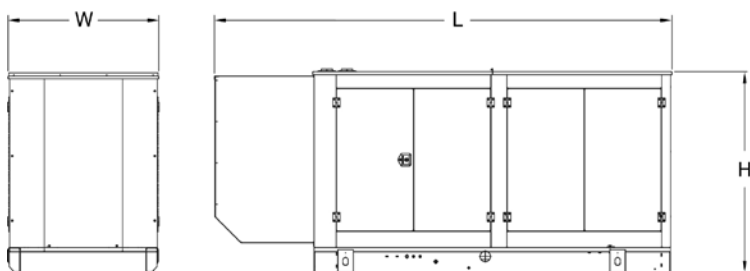
SG200

dimensions, weights, and sound levels



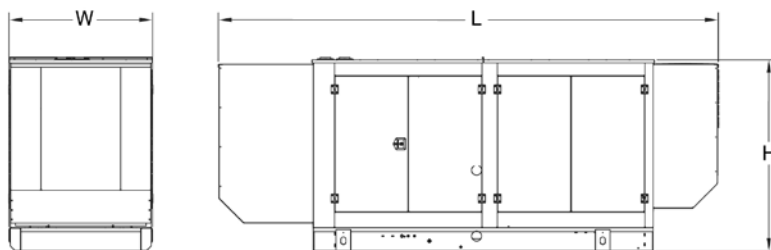
OPEN SET (Includes Exhaust Flex)

| | |
|--------------------|---|
| 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*) | 83.5 |



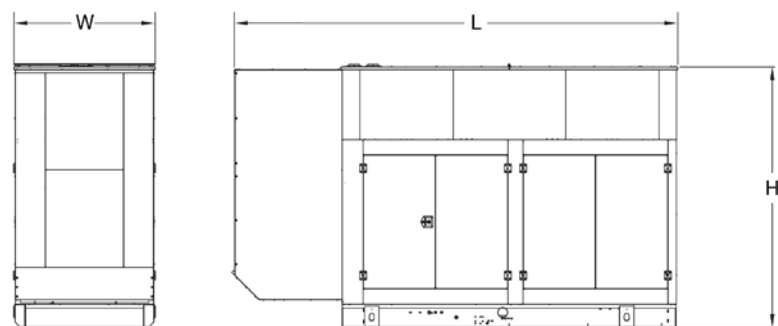
STANDARD ENCLOSURE

| | |
|--------------------|---|
| 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*) | 80.5 |



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*) | 75.9 |



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*) | 71.2 |

*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.

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

Specification characteristics may change without notice. Please consult a Generac Power Systems Industrial Dealer for detailed installation drawings.