DEMAND RESPONSE READY

Standby Power Rating
80 kW, 100 kVA, 60 Hz

Demand Response Rating
80 kW, 100 kVA, 60 Hz

Prime Power Rating
72 kW, 90 kVA, 60 Hz

Codes and Standards
Not all codes and standards apply to all configurations. Contact factory for details.

UL2200, UL6200, UL1236, UL489
CSA C22.2
BS5514 and DIN 6271
SAE J1349
NFPA 37, 70, 99, 110
NEC700, 701, 702, 708
ISO 3046, 7637, 8528, 9001
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
Generac ensures superior quality by designing and manufacturing most of its generator components, such as alternators, enclosures, control systems and communications software. Generac also makes its own spark-ignited engines, and you’ll find them on every Generac gaseous-fueled generator. We engineer and manufacture them from the block up — all at our facilities throughout Wisconsin. Applying natural gas and LP-fueled engines to generators requires advanced engineering expertise to ensure reliability, durability and necessary performance. By designing specifically for these dry, hotter-burning fuels, the engines last longer and require less maintenance. Building our own engines also means we control every step of the supply chain and delivery process, so you benefit from single-source responsibility.

Plus, Generac Industrial Power’s distribution network provides all parts and service so you don’t have to deal with third-party suppliers. It all leads to a positive owner experience and higher confidence level. Generac spark-ignited engines give you more options in commercial and industrial generator applications as well as extended run time from utility-supplied natural gas.
ENGINE SYSTEM
- Oil Drain Extension
- Air Cleaner
- Level 1 Fan and Belt Guards (Open Set Only)
- Stainless Steel Flexible Exhaust Connection
- Factory Filled Oil and Coolant
- Critical Silencer
- Oil Temperature Sender with Alarm
- Air Filter Restriction Indicator

Fuel System
- NPT Fuel Connection on Frame
- Primary and Secondary Fuel Shutoff

Cooling System
- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Factory-Installed Radiator
- 50/50 Ethylene Glycol Antifreeze
- Radiator Drain Extension

Electrical System
- Battery Charging Alternator
- Battery Cables
- Battery Tray
- Rubber-Booted Engine Electrical Connections
- Solenoid Activated Starter Motor

ALTERNATOR SYSTEM
- UL2200 GENprotect™
- Class H Insulation Material
- 2/3 Pitch
- Skewed Stator
- Brushless Excitation
- Sealed Bearing
- 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 and Demand Response Rated Units)
- 1 Year Limited Warranty (Prime Rated Units)

ENCLOSURE (If Selected)
- Rust-Proof Fasteners with Nylon Washers to Protect Finish
- High Performance Sound-Absorbing Material (Sound Attenuated Enclosures)
- Gasketed Doors
- Upward Facing Discharge Hoods (Radiator and Exhaust)
- Stainless Steel Lift Off Door Hinges
- Stainless Steel Lockable Handles
- RhinoCoat™ - Textured Polyester Powder Coat Paint

CONTACT SYSTEM
- Remote Communication via Modbus® RTU, Modbus TCP/IP, and Ethernet 1/100
- Alarm and Event Logging with Real Time Stamping
- Expandable Analog and Digital Inputs and Outputs
- Remote Wireless Software Update Capable
- Wi-Fi®, Bluetooth®, BMS, and Remote Telemetry
- Built-In Programmable Logic Eliminates the Need for External Controllers Under Most Conditions
- Programmable I/O Channel Properties
- Built-In Diagnostics

Alarms and Warnings
- High/Low Oil Pressure
- High/Low Coolant Level
- High/Low Coolant Temperature
- Sender/Sensor Failure
- High/Low Oil Temperature
- Over Total kW
- Over/Under Speed
- Over/Under Voltage
- Over/Under Frequency
- Over Current
- High/Low Battery Voltage

Battery Charger Current
- Phase to Phase and Phase to Neutral Short Circuits (I^2T Algorithm)

4.3 Inch Color Touch Screen Display
- Resistive Color Touch Screen
- Easily Identifiable Icons
- Multi-Lingual
- On Screen Editable Parameters
- Key Function Monitoring
- Three Phase Voltage, Amperage, kW, kVA, and kVAR
- Selectable Line to Line or Line to Neutral Measurements
- Frequency
- Engine Speed
- Engine Coolant Temperature
- Engine Oil Pressure
- Engine Oil Temperature
- Battery Voltage
- Hourmeter
- Warning and Alarm Indication
- Diagnostics
- Maintenance Events/Information
ENGINE SYSTEM
○ Heater with Shutoff Valves
○ Engine Coolant Heater
○ Oil Heater
○ Level 1 Fan and Belt Guards (Enclosed Units Only)
○ Radiator Duct Adapter (Open Set Only)

ELECTRICAL SYSTEM
○ 10A UL Listed Battery Charger
○ Battery Warmer

ALTERNATOR SYSTEM
○ Alternator Upsizing
○ Anti-Condensation Heater
○ Tropical Coating

CIRCUIT BREAKER OPTIONS
○ Main Line Circuit Breaker
○ 2nd Main Line Circuit Breaker
○ 3rd Main Line Circuit Breaker
○ Shunt Trip and Auxiliary Contact
○ Electronic Trip Breakers

ENGINEERED OPTIONS

CONTROL SYSTEM
○ Spare Inputs (x4) / Outputs (x4)
○ Battery Disconnect Switch

GENERATOR SET
○ Special Testing
○ Battery Box

ENCLOSURE
○ Weather Protected Enclosure
○ Level 1 Sound Attenuated
○ Level 2 Sound Attenuated
○ Level 2 Sound Attenuated with Motorized Dampers
○ Steel Enclosure
○ Aluminum Enclosure
○ Up to 200 MPH Wind Load Rating (Contact Factory for Availability)
○ AC/DC Enclosure Lighting Kit
○ Enclosure Heaters (with Motorized Dampers Only)
○ Door Open Alarm Horn

DEMAND RESPONSE READY

CONTROL SYSTEM
○ NFPA 110 Compliant 21-Light Remote Annunciator
○ Remote Relay Assembly (8 or 16)
○ Remote E-Stop (Break Glass-Type, Surface Mount)
○ Remote E-Stop (Red Mushroom-Type, Surface Mount)
○ Remote E-Stop (Red Mushroom-Type, Flush Mount)
○ 10A Engine Run Relay
○ Ground Fault Annunciator
○ 120V GFCI and 240V Outlets
○ 100 dB Alarm Horn
○ Damper Alarm Contacts (with Motorized Dampers Only)
○ Wi-Fi Extension Kit

WARRANTY (Standby Gensets Only)
○ 2 Year Extended Limited Warranty
○ 5 Year Limited Warranty
○ 5 Year Extended Limited Warranty
○ 7 Year Extended Limited Warranty
○ 10 Year Extended Limited Warranty
### APPLICATION AND ENGINEERING DATA

#### ENGINE SPECIFICATIONS

**General**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make</td>
<td>Generac</td>
</tr>
<tr>
<td>Cylinder #</td>
<td>4</td>
</tr>
<tr>
<td>Type</td>
<td>In-Line</td>
</tr>
<tr>
<td>Displacement - in³ (L)</td>
<td>275.0 (4.5)</td>
</tr>
<tr>
<td>Bore - in (mm)</td>
<td>4.5 (114.3)</td>
</tr>
<tr>
<td>Stroke - in (mm)</td>
<td>4.25 (107.95)</td>
</tr>
<tr>
<td>Compression Ratio</td>
<td>9.1:1</td>
</tr>
<tr>
<td>Intake Air Method</td>
<td>Turbocharged</td>
</tr>
<tr>
<td>Number of Main Bearings</td>
<td>5</td>
</tr>
<tr>
<td>Connecting Rods</td>
<td>Forged Steel, Fractured Split, Bushingless</td>
</tr>
<tr>
<td>Cylinder Head</td>
<td>Cast Iron</td>
</tr>
<tr>
<td>Cylinder Liners</td>
<td>Cast Iron</td>
</tr>
<tr>
<td>Ignition</td>
<td>Coil Near Plug Solid State Inductive</td>
</tr>
<tr>
<td>Piston Type</td>
<td>Cast Aluminum Flat Top</td>
</tr>
<tr>
<td>Crankshaft Type</td>
<td>Forged Steel</td>
</tr>
<tr>
<td>Lifter Type</td>
<td>Hydraulic</td>
</tr>
<tr>
<td>Intake Valve Material</td>
<td>Stainless Steel</td>
</tr>
<tr>
<td>Exhaust Valve Material</td>
<td>Stainless Steel</td>
</tr>
<tr>
<td>Hardened Valve Seats</td>
<td>High Steel Iron Alloy</td>
</tr>
</tbody>
</table>

**Engine Governing**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Governor</td>
<td>Electronic</td>
</tr>
<tr>
<td>Frequency Regulation (Steady State)</td>
<td>± 0.25%</td>
</tr>
</tbody>
</table>

### Lubrication System

- **Oil Pump Type**: Gear Driven
- **Oil Filter Type**: Full-Flow Spin-On Cartridge
- **Crankcase Capacity - qt (L)**: 21 (20)

### Cooling System

- **Cooling System Type**: Pressurized Closed
- **Fan Type**: Pusher
- **Fan Speed - RPM**: 2,100
- **Fan Diameter - in (mm)**: 22 (533)

### Fuel System

- **Fuel Type**: Natural Gas, Propane
- **Fuel Injection**: Electronic
- **Fuel Shut Off**: Generac
- **Operating Fuel Pressure (Standard) - in H₂O (kPa)**: 5 - 14 (1.2 - 3.5)

### Engine Electrical System

- **System Voltage**: 12 VDC
- **Battery Charger Alternator**: Standard
- **Battery Size**: See Battery Index 0161970SBY
- **Battery Voltage**: 12 VDC
- **Ground Polarity**: Negative

### ALTERNATOR SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Model</td>
<td>K0080124Y21</td>
</tr>
<tr>
<td>Poles</td>
<td>4</td>
</tr>
<tr>
<td>Field Type</td>
<td>Revolving</td>
</tr>
<tr>
<td>Insulation Class - Rotor</td>
<td>H</td>
</tr>
<tr>
<td>Insulation Class - Stator</td>
<td>H</td>
</tr>
<tr>
<td>Total Harmonic Distortion</td>
<td>&lt;5% (3-Phase Only)</td>
</tr>
<tr>
<td>Telephone Interference Factor (TIF)</td>
<td>&lt;50</td>
</tr>
</tbody>
</table>

- **Standard Excitation**: Brushless Synchronous
- **Bearings**: Sealed Ball
- **Coupling**: Direct via Flexible Disc
- **Prototype Short Circuit Test**: Yes
- **Voltage Regulator Type**: Full Digital
- **Number of Sensed Phases**: All
- **Regulation Accuracy (Steady State)**: ± 0.25%
## POWER RATINGS

<table>
<thead>
<tr>
<th>Voltage/Phase</th>
<th>Power Rating</th>
<th>Standby</th>
<th>Prime</th>
</tr>
</thead>
<tbody>
<tr>
<td>120/240 VAC @1.0pf</td>
<td>80 kW</td>
<td>80 kW/80 kVA</td>
<td>72 kW/72 kVA</td>
</tr>
<tr>
<td>302/480 VAC @0.8pf</td>
<td>72 kW</td>
<td>72 kW/72 kVA</td>
<td>60 kW/60 kVA</td>
</tr>
<tr>
<td>277/480 VAC @0.8pf</td>
<td>72 kW</td>
<td>72 kW/72 kVA</td>
<td>60 kW/60 kVA</td>
</tr>
<tr>
<td>346/600 VAC @0.8pf</td>
<td>72 kW</td>
<td>72 kW/72 kVA</td>
<td>60 kW/60 kVA</td>
</tr>
</tbody>
</table>

**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 contact a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528, and DIN6271 standards.

#### Standby - See Bulletin 0187500SSB

#### Prime - See Bulletin 0187510SSB

### MOTOR STARTING CAPABILITIES (skVA)

<table>
<thead>
<tr>
<th>Voltage/Phase</th>
<th>skVA vs. Voltage Dip</th>
</tr>
</thead>
<tbody>
<tr>
<td>1Ø 120/240 VAC 30%</td>
<td>58 K0070044N21</td>
</tr>
<tr>
<td>3Ø 277/480 VAC 30%</td>
<td>67 K0070044N21</td>
</tr>
<tr>
<td>3Ø 208/240 VAC 30%</td>
<td>105 K0130044N21</td>
</tr>
</tbody>
</table>

### FUEL CONSUMPTION RATES*

#### Natural Gas – scfh (m³/hr)

<table>
<thead>
<tr>
<th>Percent Load</th>
<th>Standby</th>
<th>Prime</th>
</tr>
</thead>
<tbody>
<tr>
<td>25%</td>
<td>765 (21.7)</td>
<td>267 (7.6)</td>
</tr>
<tr>
<td>50%</td>
<td>850 (24.1)</td>
<td>487 (13.8)</td>
</tr>
<tr>
<td>75%</td>
<td>955 (27.0)</td>
<td>717 (20.3)</td>
</tr>
<tr>
<td>100%</td>
<td>1,063 (30.1)</td>
<td>955 (27.0)</td>
</tr>
</tbody>
</table>

#### Propane – scfh (m³/hr)

<table>
<thead>
<tr>
<th>Percent Load</th>
<th>Standby</th>
<th>Prime</th>
</tr>
</thead>
<tbody>
<tr>
<td>25%</td>
<td>294 (8.3)</td>
<td>83 (2.4)</td>
</tr>
<tr>
<td>50%</td>
<td>324 (9.2)</td>
<td>185 (5.2)</td>
</tr>
<tr>
<td>75%</td>
<td>360 (10.2)</td>
<td>277 (7.8)</td>
</tr>
<tr>
<td>100%</td>
<td>393 (11.1)</td>
<td>359 (10.2)</td>
</tr>
</tbody>
</table>

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

### COOLING

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Standby</th>
<th>Prime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Flow (Fan Air Flow Across Radiator) - Open Set</td>
<td>cfm (m³/min)</td>
<td>4,343 (123)</td>
</tr>
<tr>
<td>Coolant Flow</td>
<td>gpm (Lpm)</td>
<td>24 (90)</td>
</tr>
<tr>
<td>Coolant System Capacity</td>
<td>gal (L)</td>
<td>9 (34)</td>
</tr>
<tr>
<td>Maximum Operating Ambient Temperature</td>
<td>°F (°C)</td>
<td>122 (50)</td>
</tr>
<tr>
<td>Maximum Operating Ambient Temperature (Before Derate)</td>
<td>°F (°C)</td>
<td>See Bulletin No. 0199270SSS</td>
</tr>
<tr>
<td>Maximum Additional Radiator Backpressure</td>
<td>in H2O (kPa)</td>
<td>0.5 (0.12)</td>
</tr>
</tbody>
</table>

### COMBUSTION AIR REQUIREMENTS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Standby</th>
<th>Prime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow at Rated Power - cfm (m³/min)</td>
<td>178 (5.0)</td>
<td></td>
</tr>
<tr>
<td>161 (4.6)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ENGINE

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Standby</th>
<th>Prime</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPM</td>
<td>1,800</td>
<td></td>
</tr>
<tr>
<td>Horsepower at Rated kW**</td>
<td>hp</td>
<td>128</td>
</tr>
<tr>
<td>Piston Speed</td>
<td>ft/min (m/min)</td>
<td>1,275 (389)</td>
</tr>
<tr>
<td>BMEP</td>
<td>psi (kPa)</td>
<td>214 (1,473)</td>
</tr>
</tbody>
</table>

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

** Horsepower at Rated kW**

** Excess Air Ratio**

** Combustion Air Requirements**

** Exhaust**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Standby</th>
<th>Prime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exhaust Flow (Rated Output)</td>
<td>cfm (m³/min)</td>
<td>456 (13.0)</td>
</tr>
<tr>
<td>Maximum Allowable Exhaust Backpressure (Post Silencer)</td>
<td>inHg (kPa)</td>
<td>0.75 (2.54)</td>
</tr>
<tr>
<td>Exhaust Temperature (Rated Output)</td>
<td>°F (°C)</td>
<td>1,425 (774)</td>
</tr>
<tr>
<td>1,370 (743)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

** Standby - See Bulletin 0187500SSB**

** Prime - See Bulletin 0187510SSB**
# SGD080 | 4.5L | 80 kW
INDUSTRIAL SPARK-IGNITED GENERATOR SET
EPA Certified Stationary

## DIMENSIONS AND WEIGHTS*

### OPEN SET

<table>
<thead>
<tr>
<th>L x W x H - in (mm)</th>
<th>Weight - lbs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>92.9 (2,360) x 40.0 (1,016) x 75.4 (1,915)</td>
<td>Contact Factory</td>
</tr>
</tbody>
</table>

### WEATHER PROTECTED ENCLOSURE

<table>
<thead>
<tr>
<th>L x W x H - in (mm)</th>
<th>Weight - lbs (kg)</th>
</tr>
</thead>
</table>
| 120.3 (3,060) x 40.0 (1,016) x 69.1 (1,756) | Steel: Contact Factory  
| | Aluminum: Contact Factory |

### LEVEL 1 SOUND ATTENUATED ENCLOSURE

<table>
<thead>
<tr>
<th>L x W x H - in (mm)</th>
<th>Weight - lbs (kg)</th>
</tr>
</thead>
</table>
| 120.3 (3,060) x 40.0 (1,016) x 69.1 (1,756) | Steel: Contact Factory  
| | Aluminum: Contact Factory |

### LEVEL 2 SOUND ATTENUATED ENCLOSURE

<table>
<thead>
<tr>
<th>L x W x H - in (mm)</th>
<th>Weight - lbs (kg)</th>
</tr>
</thead>
</table>
| 120.3 (3,060) x 40.0 (1,016) x 69.1 (1,756) | Steel: Contact Factory  
| | Aluminum: Contact Factory |

*All measurements are approximate and for estimation purposes only.

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