Standby Power Rating
625 kW, 781 kVA, 60 Hz

Demand Response Power Rating
625 kW, 781 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, B149
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

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.
SG625 | 33.9L | 625 kW
INDUSTRIAL SPARK-IGNITED GENERATOR SET
EPA Certified Stationary Emergency and Non-Emergency

STANDARD FEATURES

ENGINE SYSTEM
- Oil Drain Extension
- Heavy Duty Air Cleaner
- Level 1 Fan and Belt Guards (Open Set Only)
- Stainless Steel Flexible Exhaust Connection
- Radiator Duct Adapter (Open Set Only)
- Critical Silencer/Catalyst
- Coolant Heater Ball Valves
- Factory Filled Oil and Coolant
- Oil Temperature Sender with Indication Alarm

FUEL SYSTEM
- Primary and Secondary Fuel Shutoff

COOLING SYSTEM
- Closed Coolant Recovery System
- Factory-Installed Radiator
- Radiator Drain Extension
- 50/50 Ethylene Glycol Antifreeze

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
- Permanent Magnet Excitation
- Sealed Bearings
- Amortisseur Winding
- Low Temperature Rise (<120 °C)

GENERATOR SET
- Spring Isolators Under Frame
- Separation of Circuits - High/Low Voltage
- Separation of Circuits - Multiple Breakers
- Wrapped Exhaust Piping (Enclosed Units Only)
- Standard Factory Testing
- 2 Year Limited Warranty (Standby or Demand Response Rated Units)
- Ready to Accept Load in <10 Seconds

ENCLOSURE (If Selected)
- Structural Steel Sub-Base
- Sub-Base Lifting Eyes
- Enamel Finish
- Zinc Plated Fasteners
- Zinc Plated Cast Aluminum Keylock Door Handles
- Heavy Duty Stainless Steel Hinges with Removable Brass Pins
- Modular Construction
- Rhino Coat™ - Textured Polyester Powder Coat Paint

CONTROL SYSTEM

Power Zone® Pro Sync Controller
- NFPA 110 Level 1 Compliant
- Engine Protective Functions
- Alternator Protective Functions
- Digital Engine Governor Control
- Digital Voltage Regulator
- Multiple Programmable Inputs and Outputs
- Remote Display Capability
- Remote Communication via Modbus® RTU, Modbus TCP/IP, and Ethernet 10/100
- Alarm and Event Logging with Real Time Stamping
- Expandable Analog and Digital Inputs and Outputs
- Remote Wireless Software Update Capable
- BMS and Remote Telemetry
- Built-In Programmable Logic Eliminates the Need for External Controllers Under Most Conditions
- Ethernet Based Communications Between Generators
- Programmable I/O Channel Properties
- Built-In Diagnostics
- Arc Flash Maintenance Mode (When Properly Equipped)

Alarms and Warnings
- Low Oil Pressure
- Low Coolant Level
- High/Low Coolant Temperature
- Sensor Failure
- Oil Temperature
- Over/Under Speed
- Over/Under Voltage
- Over/Under Frequency
- Over/Under Current
- Over Load
- High/Low Battery Voltage
- Battery Charger Current
- Phase to Phase and Phase to Neutral Short Circuits (I2T Algorithm)

7 Inch Color Touch Screen Display
- Resistive Color Touch Screen
- Sunlight Readable (1400 NITS)
- 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
SG625 | 33.9L | 625 kW
INDUSTRIAL SPARK-IGNITED GENERATOR SET
EPA Certified Stationary Emergency and Non-Emergency

CONFIGURABLE OPTIONS

ENGINE SYSTEM
○ Engine Coolant Heater
○ Oil Heater
○ Level 1 Fan and Belt Guards (Enclosed Units Only)
○ Two Stage Air Cleaner
○ Air Filter Restriction Indicator
○ Radiator Stone Guard (Open Set Only)
○ Shipped Loose Catalyst Silencer (Enclosed Units Only)

ELECTRICAL SYSTEM
○ 20A UL Listed Battery Charger
○ Battery Warmer

FUEL SYSTEM
○ NPT Flexible Fuel Line

ALTERNATOR SYSTEM
○ Alternator Upsizing
○ Anti-Condensation Heater

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

 GENERATOR SET
○ Spring Vibration Isolator
○ Extended Factory Testing
○ 24 Position Load Center

ENCLOSURE
○ Level 0 Sound Attenuated
○ Level 1 Sound Attenuated
○ Level 2 Sound Attenuated
○ Level 1 Sound Attenuated with Motorized Dampers
○ Level 2 Sound Attenuated with Motorized Dampers
○ Steel Enclosure
○ Aluminum Enclosure
○ AC Enclosure Lighting Kit
○ Enclosure Heater (With Motorized Dampers Only)
○ Up to 200 MPH Wind Load Rating (Contact Factory for Availability)

CONTROL SYSTEM
○ NFPA 110 Level 1 Compliant 21-Light Remote Annunciator
○ Remote Output Relays (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
○ Damper Alarm Contacts (With Motorized Dampers Only)
○ 100 dB Alarm Horn
○ 120V GFCI and 240V Outlets

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

DEMAND RESPONSE READY

ENGINEERED OPTIONS

CONTROL SYSTEM
○ Additional Spare Inputs/Outputs
○ Battery Disconnect Switch

ALTERNATOR SYSTEM
○ 3rd Main Line Circuit Breakers
○ 4th Main Line Circuit Breakers
○ Unit Mounted Load Banks
○ Medium Voltage Alternators

ENCLOSURE
○ Door Open Alarm Horn

GENERATOR SET
○ Special Testing
○ Battery Boxes
### 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>12</td>
</tr>
<tr>
<td>Type</td>
<td>V</td>
</tr>
<tr>
<td>Displacement - in³ (L)</td>
<td>2,068 (33.9)</td>
</tr>
<tr>
<td>Bore - in (mm)</td>
<td>5.9 (150)</td>
</tr>
<tr>
<td>Stroke - in (mm)</td>
<td>6.3 (160)</td>
</tr>
<tr>
<td>Compression Ratio</td>
<td>10.0:1</td>
</tr>
<tr>
<td>Intake Air Method</td>
<td>Turbocharged/Aftercooled</td>
</tr>
<tr>
<td>Number of Main Bearings</td>
<td>7</td>
</tr>
<tr>
<td>Cylinder Head</td>
<td>4 Valve</td>
</tr>
<tr>
<td>Ignition</td>
<td>Electronic</td>
</tr>
<tr>
<td>Piston Type</td>
<td>Cast Aluminum Alloy</td>
</tr>
<tr>
<td>Crankshaft Type</td>
<td>Chromium Molybdenum Steel</td>
</tr>
<tr>
<td>Lifter Type</td>
<td>Solid</td>
</tr>
<tr>
<td>Intake Valve Material</td>
<td>Proprietary Alloy</td>
</tr>
<tr>
<td>Exhaust Valve Material</td>
<td>Proprietary Alloy</td>
</tr>
<tr>
<td>Hardened Valve Seats</td>
<td>Proprietary 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**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil Pump Type</td>
<td>Gear Driven</td>
</tr>
<tr>
<td>Oil Filter Type</td>
<td>Full Flow Spin-On Cartridge</td>
</tr>
<tr>
<td>Crankcase Capacity with Filter - qt (L)</td>
<td>126.8 (120)</td>
</tr>
</tbody>
</table>

**Cooling System**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooling System Type</td>
<td>Forced Circulation by Centrifugal Pump</td>
</tr>
<tr>
<td>Fan Type</td>
<td>Pusher</td>
</tr>
<tr>
<td>Fan Speed - RPM</td>
<td>1,080</td>
</tr>
<tr>
<td>Fan Diameter - in (mm)</td>
<td>64 (1,626)</td>
</tr>
</tbody>
</table>

**Fuel System**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel Type</td>
<td>Natural Gas</td>
</tr>
<tr>
<td>Carburetor</td>
<td>Down Draft</td>
</tr>
<tr>
<td>Secondary Fuel Regulator</td>
<td>Standard</td>
</tr>
<tr>
<td>Fuel Shut Off Solenoid</td>
<td>Standard</td>
</tr>
<tr>
<td>Operating Fuel Pressure</td>
<td>in H₂O (kPa) 14 - 20 (3.5 - 5.0)</td>
</tr>
</tbody>
</table>

**Engine Electrical System**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Voltage</td>
<td>24 VDC</td>
</tr>
<tr>
<td>Battery Charger Alternator</td>
<td>Standard</td>
</tr>
<tr>
<td>Battery Size</td>
<td>See Battery Index 0161970SBY</td>
</tr>
<tr>
<td>Battery Voltage</td>
<td>(4) - 12 VDC</td>
</tr>
<tr>
<td>Ground Polarity</td>
<td>Negative</td>
</tr>
</tbody>
</table>

### ALTERNATOR SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Model</td>
<td>K0732124Y22</td>
</tr>
<tr>
<td>Poles</td>
<td>4</td>
</tr>
<tr>
<td>Field Type</td>
<td>Rotating</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%</td>
</tr>
<tr>
<td>Telephone Interference Factor (TIF)</td>
<td>&lt;50</td>
</tr>
<tr>
<td>Standard Excitation</td>
<td>Permanent Magnet</td>
</tr>
<tr>
<td>Bearings</td>
<td>Single</td>
</tr>
<tr>
<td>Coupling</td>
<td>Direct via Flexible Disc</td>
</tr>
<tr>
<td>Prototype Short Circuit Test</td>
<td>Yes</td>
</tr>
<tr>
<td>Voltage Regulator Type</td>
<td>Full Digital</td>
</tr>
<tr>
<td>Number of Sensed Phases</td>
<td>All</td>
</tr>
<tr>
<td>Regulation Accuracy (Steady State)</td>
<td>±0.25%</td>
</tr>
</tbody>
</table>
### POWER RATINGS - NATURAL GAS

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Standby</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three-Phase 120/208 VAC @0.8pf</td>
<td>625 kW/781 kVA</td>
</tr>
<tr>
<td>Three-Phase 120/240 VAC @0.8pf</td>
<td>625 kW/781 kVA</td>
</tr>
<tr>
<td>Three-Phase 277/480 VAC @0.8pf</td>
<td>625 kW/781 kVA</td>
</tr>
<tr>
<td>Three-Phase 346/600 VAC @0.8pf</td>
<td>625 kW/781 kVA</td>
</tr>
</tbody>
</table>

### MOTOR STARTING CAPABILITIES (skVA)

<table>
<thead>
<tr>
<th>skVA vs. Voltage Dip</th>
<th>277/480 VAC</th>
<th>30%</th>
<th>208/240 VAC</th>
<th>30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>K0732124Y22</td>
<td>2,450</td>
<td></td>
<td>K0820124Y22</td>
<td>2,560</td>
</tr>
<tr>
<td>K0912124Y22</td>
<td>3,250</td>
<td></td>
<td>K0912124Y22</td>
<td>3,250</td>
</tr>
<tr>
<td>K1000124Y22</td>
<td></td>
<td></td>
<td></td>
<td>3,900</td>
</tr>
</tbody>
</table>

### FUEL CONSUMPTION RATES*

<table>
<thead>
<tr>
<th>Percent Load</th>
<th>Standby</th>
</tr>
</thead>
<tbody>
<tr>
<td>25%</td>
<td>2,725 (77.2)</td>
</tr>
<tr>
<td>50%</td>
<td>3,923 (111.1)</td>
</tr>
<tr>
<td>75%</td>
<td>5,294 (149.9)</td>
</tr>
<tr>
<td>100%</td>
<td>6,847 (193.9)</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>
</tr>
</thead>
<tbody>
<tr>
<td>Air Flow (Fan Air Flow Across Radiator) - Open Set</td>
<td>34,000 (962.8)</td>
</tr>
<tr>
<td>Coolant Flow</td>
<td>291 (1.101)</td>
</tr>
<tr>
<td>Coolant System Capacity</td>
<td>55 (206)</td>
</tr>
<tr>
<td>Maximum Operating Ambient Temperature °F (°C)</td>
<td>122 (50)</td>
</tr>
<tr>
<td>Maximum Operating Ambient Temperature (Before Derate)</td>
<td>See Bulletin No. 0199270SSD</td>
</tr>
<tr>
<td>Maximum Additional Radiator Backpressure in H₂O (kPa)</td>
<td>0.5 (0.12)</td>
</tr>
</tbody>
</table>

### COMBUSTION AIR REQUIREMENTS

<table>
<thead>
<tr>
<th>Standby</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow at Rated Power - cfm (m³/min)</td>
</tr>
</tbody>
</table>

### ENGINE

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Standby</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated Engine Speed</td>
<td>1,800</td>
</tr>
<tr>
<td>Horsepower at Rated kW**</td>
<td>941</td>
</tr>
<tr>
<td>Piston Speed</td>
<td>1,890 (576)</td>
</tr>
<tr>
<td>BMEP psi (kPa)</td>
<td>188 (1,301)</td>
</tr>
</tbody>
</table>

### EXHAUST

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Standby</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exhaust Flow (Rated Output)</td>
<td>4,067 (115)</td>
</tr>
<tr>
<td>Maximum Allowable Exhaust Backpressure (Post Silencer)</td>
<td>0.75 (2.54)</td>
</tr>
<tr>
<td>Exhaust Temperature (Rated Output - Post Catalyst) °F (°C)</td>
<td>1,166 (630)</td>
</tr>
</tbody>
</table>

** Refer to “Emissions Data Sheet” for maximum bHP for EPA and SCAGMD permitting purposes.
**INDUSTRIAL SPARK-IGNITED GENERATOR SET**

**EPA Certified Stationary Emergency and Non-Emergency**

**DIMENSIONS AND WEIGHTS***

**OPEN SET**

\[
\text{L x W x H - in (mm)} \quad 178.3 (4,528) \times 82.6 (2,098) \times 110.3 (2,801)
\]

\[
\text{Weight - lbs (kg)} \quad 14,352 - 14,932 (6,510 - 6,733)
\]

**LEVEL 0 SOUND ATTENUATED ENCLOSURE**

\[
\text{L x W x H - in (mm)} \quad 201.0 (5,105) \times 96.0 (2,438) \times 155.2 (3,941)
\]

\[
\text{Weight - lbs (kg)} \quad \begin{align*}
\text{Steel:} & \quad 18,051 - 18,631 (8,188 - 8,451) \\
\text{Aluminum:} & \quad 17,220 - 17,800 (7,811 - 8,074)
\end{align*}
\]

**LEVEL 1 SOUND ATTENUATED ENCLOSURE**

\[
\text{L x W x H - in (mm)} \quad 287.0 (7,290) \times 96.0 (2,438) \times 153.0 (3,886)
\]

\[
\text{Weight - lbs (kg)} \quad \begin{align*}
\text{Steel:} & \quad 21,876 - 22,456 (9,923 - 10,186) \\
\text{Aluminum:} & \quad 19,193 - 19,773 (8,706 - 8,969)
\end{align*}
\]

**LEVEL 2 SOUND ATTENUATED ENCLOSURE**

\[
\text{L x W x H - in (mm)} \quad 340.0 (8,636) \times 151.4 (3,845) \times 153.0 (3,886)
\]

\[
\text{Weight - lbs (kg)} \quad \begin{align*}
\text{Steel:} & \quad 22,901 - 23,481 (10,388 - 10,651) \\
\text{Aluminum:} & \quad 19,634 - 20,214 (8,906 - 9,169)
\end{align*}
\]

*All measurements are approximate and for estimation purposes only.

**YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER**

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