SG300 | 14.2L | 300 kW
INDUSTRIAL SPARK-IGNITED GENERATOR SET
EPA Certified Stationary Emergency and Non-Emergency

DEMAND RESPONSE READY

Standby Power Rating
300 kW, 375 kVA, 60 Hz

Demand Response Rating
300 kW, 375 kVA, 60 Hz

Prime Power Rating
270 kW, 338 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, 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
- Fan Guard
- Stainless Steel Flexible Exhaust Connection
- Factory Filled Oil and Coolant
- Radiator Duct Adapter (Open Set Only)
- Critical Silencer (Enclosed Units Only)
- Oil Temperature Indication and Alarm

**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
- Permanent Magnet Excitation
- Sealed Bearing
- 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)
- Ready to Accept Full Load in <10 Seconds

**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 Hood (Radiator and Exhaust)
- Stainless Steel Lift Off Door Hinges
- Stainless Steel Lockable Handles
- RhinoCoat™ - Textured Polyester Powder Coat Paint

**CONTROL SYSTEM**
- Wi-Fi, Bluetooth, 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

**Program Functions**
- 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

**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
ENGINE SYSTEM
- Engine Coolant Heater
- Baseframe Cover/Rodent Guard
- 2 Stage Air Cleaner
- Oil Heater
- Air Filter Restriction Indicator
- Radiator Stone Guard (Open Set Only)
- Level 1 Fan and Belt Guards

FUEL SYSTEM
- NPT Flexible Fuel Line

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
- Shunt Trip and Auxiliary Contact
- Electronic Trip Breakers

ENGINEERED OPTIONS

ENGINE SYSTEM
- Fluid Containment Pans

CONTROL SYSTEM
- Battery Disconnect Switch

ALTERNATOR SYSTEM
- 3rd Main Line Circuit Breaker
- 4th Main Line Circuit Breaker

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
- Level 3 Sound Attenuated (Steel Only)
- Steel Enclosure
- Aluminum Enclosure
- Up to 200 MPH Wind Load Rating (Contact Factory for Availability)
- AC/DC Enclosure Lighting Kit
- Enclosure Heaters
- IBC Seismic Certification
- Door Open Alarm Switch

DEMAND RESPONSE READY

ENGINEERED OPTIONS

ENGINE SYSTEM
- Engine Coolant Heater
- Baseframe Cover/Rodent Guard
- 2 Stage Air Cleaner
- Oil Heater
- Air Filter Restriction Indicator
- Radiator Stone Guard (Open Set Only)
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CIRCUIT BREAKER OPTIONS
- Main Line Circuit Breaker
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- Shunt Trip and Auxiliary Contact
- Electronic Trip Breakers

WARRANTY (Standby Gensets Only)
- 2 Year Extended Limited Warranty
- 5 Year Extended Limited Warranty
- 7 Year Extended Limited Limited Warranty
- 10 Year Extended Limited Warranty
## ENGINE SPECIFICATIONS

### General

- **Make**: Generac
- **Cylinder #**: 6
- **Type**: In-line
- **Displacement - in³ (L)**: 864.71 (14.2)
- **Bore - in (mm)**: 5.31 (135)
- **Stroke - in (mm)**: 6.50 (165)
- **Compression Ratio**: 9.5:1
- **Intake Air Method**: Turbocharged/Aftercooled
- **Number of Main Bearings**: 7
- **Connecting Rods**: Steel Alloy
- **Cylinder Head**: Cast Iron GT250, OHV
- **Cylinder Liners**: Ductile Iron
- **Ignition**: Electronic
- **Piston Type**: Aluminum
- **Crankshaft Type**: Ductile Iron
- **Lifter Type**: Solid
- **Intake Valve Material**: Special Heat-Resistant Steel
- **Exhaust Valve Material**: High Temp Steel Alloy
- **Hardened Valve Seats**: High Temp Steel Alloy

### Engine Governing

- **Governor**: Electronic
- **Frequency Regulation (Steady State)**: ±0.25%

### Lubrication System

- **Oil Pump Type**: Gear
- **Oil Filter Type**: Full-Flow with Cartridge
- **Crankcase Capacity - qt (L)**: 36.2 (34.3)

### Cooling System

- **Cooling System Type**: Pressurized Closed Recovery
- **Fan Type**: Pusher
- **Fan Speed - RPM**: 1,894
- **Fan Diameter - in (mm)**: 34 (864)

### Fuel System

- **Fuel Type**: Natural Gas
- **Carburetor**: Down Draft
- **Secondary Fuel Regulator**: Standard
- **Fuel Shut Off Solenoid**: Standard
- **Operating Fuel Pressure - in H₂O (kPa)**: 7 - 11 (1.7 - 2.7)

### Engine Electrical System

- **System Voltage**: 24 VDC
- **Battery Charger Alternator**: 58 A
- **Battery Size**: See Battery Index 0161970SBY
- **Battery Voltage**: (2) - 12 VDC
- **Ground Polarity**: Negative

## ALTERNATOR SPECIFICATIONS

### Standard Model

- **K0300124Y21

### Poles

- **4

### Field Type

- **Revolving

### Insulation Class - Rotor

- **H

### Insulation Class - Stator

- **H

### Total Harmonic Distortion

- **<5% (3-Phase)

### Telephone Interference Factor (TIF)

- **<50

### Standard Excitation

- **Permanent Magnet

### 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%
**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.

Demand Response - See Bulletin 10000018250
Prime - See Bulletin 0187510SSB

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## OPERATING DATA

### POWER RATINGS — NATURAL GAS

<table>
<thead>
<tr>
<th></th>
<th>Standby/Demand Response</th>
<th>Prime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three-Phase 120/208 VAC @0.8pf</td>
<td>300 kW/375 kVA</td>
<td>Amps: 1,042</td>
</tr>
<tr>
<td>Three-Phase 120/240 VAC @0.8pf</td>
<td>300 kW/375 kVA</td>
<td>Amps: 903</td>
</tr>
<tr>
<td>Three-Phase 277/480 VAC @0.8pf</td>
<td>300 kW/375 kVA</td>
<td>Amps: 452</td>
</tr>
<tr>
<td>Three-Phase 346/600 VAC @0.8pf</td>
<td>300 kW/375 kVA</td>
<td>Amps: 361</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>K0300124Y21</td>
<td>790</td>
<td></td>
<td>K0300124Y21</td>
<td>609</td>
</tr>
</tbody>
</table>

### FUEL CONSUMPTION RATES*

<table>
<thead>
<tr>
<th>Percent Load</th>
<th>Standby/Demand Response</th>
<th>Prime</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Natural Gas – scfh (m³/hr)</td>
<td></td>
</tr>
<tr>
<td>25%</td>
<td>1,260 (35.7)</td>
<td>1,200 (34.0)</td>
</tr>
<tr>
<td>50%</td>
<td>1,980 (56.1)</td>
<td>1,860 (52.7)</td>
</tr>
<tr>
<td>75%</td>
<td>2,700 (76.5)</td>
<td>2,460 (69.7)</td>
</tr>
<tr>
<td>100%</td>
<td>3,420 (96.8)</td>
<td>3,120 (88.3)</td>
</tr>
</tbody>
</table>

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

### COOLING

<table>
<thead>
<tr>
<th></th>
<th>Standby/Demand Response</th>
<th>Prime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Flow (Fan Air Flow Across Radiator)</td>
<td>scfm (m³/min)</td>
<td>15,946 (452)</td>
</tr>
<tr>
<td>Coolant Flow</td>
<td>gpm (Lpm)</td>
<td>90 (340.7)</td>
</tr>
<tr>
<td>Coolant System Capacity</td>
<td>gal (L)</td>
<td>15 (54.9)</td>
</tr>
<tr>
<td>Maximum Operating Ambient Temperature</td>
<td>°F (°C)</td>
<td>122 (50)</td>
</tr>
<tr>
<td>Maximum Radiator Backpressure</td>
<td>in H₂O (kPa)</td>
<td>0.5 (0.12)</td>
</tr>
</tbody>
</table>

### COMBUSTION AIR REQUIREMENTS

<table>
<thead>
<tr>
<th></th>
<th>Standby/Demand Response</th>
<th>Prime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow at Rated Power - scfm (m³/min)</td>
<td>540 (15.3)</td>
<td>497 (14.1)</td>
</tr>
</tbody>
</table>

### ENGINE

<table>
<thead>
<tr>
<th></th>
<th>Standby/Demand Response</th>
<th>Prime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated Engine Speed</td>
<td>RPM</td>
<td>1,800</td>
</tr>
<tr>
<td>Horsepower at Rated kW**</td>
<td>hp</td>
<td>448</td>
</tr>
<tr>
<td>Piston Speed</td>
<td>ft/min (m/min)</td>
<td>1,950 (594)</td>
</tr>
<tr>
<td>BMEP</td>
<td>psi (kPa)</td>
<td>227 (1,568)</td>
</tr>
</tbody>
</table>

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

OPEN SET (Includes Exhaust Flex)

<table>
<thead>
<tr>
<th>L x W x H - in (mm)</th>
<th>Minimum Weight - lbs (kg)</th>
<th>Maximum Weight - lbs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>136.0 (3,454) x 57.1 (1,450) x 67.9 (1,725)</td>
<td>6,200 (2,812)</td>
<td>6,587 (2,987)</td>
</tr>
</tbody>
</table>

WEATHER PROTECTED ENCLOSURE

<table>
<thead>
<tr>
<th>L x W x H - in (mm)</th>
<th>Steel Weight Minimum - lbs (kg)</th>
<th>Steel Weight Maximum - lbs (kg)</th>
<th>Aluminum Weight Minimum - lbs (kg)</th>
<th>Aluminum Weight Maximum - lbs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>174.7 (4,343) x 57.5 (1,461) x 77.8 (1,976)</td>
<td>7.535 (3,417)</td>
<td>7.919 (3,591)</td>
<td>6.978 (3,165)</td>
<td>7.359 (3,337)</td>
</tr>
</tbody>
</table>

LEVEL 1 SOUND ATTENUATED ENCLOSURE

<table>
<thead>
<tr>
<th>L x W x H - in (mm)</th>
<th>Steel Weight Minimum - lbs (kg)</th>
<th>Steel Weight Maximum - lbs (kg)</th>
<th>Aluminum Weight Minimum - lbs (kg)</th>
<th>Aluminum Weight Maximum - lbs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>200.2 (5,085) x 57.5 (1,461) x 77.8 (1,976)</td>
<td>7.776 (3,524)</td>
<td>8.273 (3,752)</td>
<td>7.176 (3,254)</td>
<td>7.625 (3,458)</td>
</tr>
</tbody>
</table>

LEVEL 2 SOUND ATTENUATED ENCLOSURE

<table>
<thead>
<tr>
<th>L x W x H - in (mm)</th>
<th>Steel Weight Minimum - lbs (kg)</th>
<th>Steel Weight Maximum - lbs (kg)</th>
<th>Aluminum Weight Minimum - lbs (kg)</th>
<th>Aluminum Weight Maximum - lbs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>180.6 (4,587) x 57.5 (1,461) x 111.3 (2,827)</td>
<td>8.804 (3,993)</td>
<td>9.188 (4,167)</td>
<td>7.423 (3,366)</td>
<td>7.870 (3,569)</td>
</tr>
</tbody>
</table>

LEVEL 3 SOUND ATTENUATED ENCLOSURE

<table>
<thead>
<tr>
<th>L x W x H - in (mm)</th>
<th>Steel Weight Minimum - lbs (kg)</th>
<th>Steel Weight Maximum - lbs (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>207.3 (5,265) x 63.7 (1,618) x 128.9 (3,274)</td>
<td>10,718 (4,861)</td>
<td>11,080 (5,025)</td>
</tr>
</tbody>
</table>

* 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.