Demand Response Rating
45 kW, 56 kVA, 60 Hz

Prime Power Rating
41 kW, 51 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
- Fan Guard
- Stainless Steel Flexible Exhaust Connection
- Factory Filled Oil and Coolant
- Oil Temperature Sender with Alarm
- Air Filter Restriction Indicator
- Heavy Duty Air Cleaner

**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

**ENGINE SYSTEM**
- 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

**CONTROL SYSTEM**
- 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
- 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<sup>2</sup>T 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
### CONFIGURABLE OPTIONS

#### ENGINE SYSTEM
- Heater with Shut-off Valves
- Fluid Containment Pan
- Engine Coolant Heater
- Oil Heater
- Level 1 Fan and Belt Guards (Enclosed Units Only)
- Radiator Duct Adapter (Open Set Only)
- Baseframe Cover/Rodent Guard
- Industrial Grade Air Cleaner
- Critical Silencer

#### 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

#### 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

#### ENGINEERED OPTIONS

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

#### GENERATOR SET
- Demand Response Rating
- Extended Factory Testing (3-Phase Only)
- 8 Position Load Center
- Pad Vibration Isolators
- Spring Vibration Isolators

#### 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
**ENGINE SPECIFICATIONS**

**General**
- **Make:** Generac
- **Cylinder #** 4
- **Type:** In-Line
- **Displacement - in³ (L):** 275.0 (4.5)
- **Bore - in (mm):** 4.5 (114.3)
- **Stroke - in (mm):** 4.25 (107.95)
- **Compression Ratio:** 9.94:1
- **Intake Air Method:** Naturally Aspirated
- **Number of Main Bearings:** 5
- **Connecting Rods:** Forged Steel, Fractured Split, Bushingless
- **Cylinder Head:** Cast Iron
- **Cylinder Liners:** Cast Iron
- **Ignition:** Coil Near Plug Solid State Inductive
- **Piston Type:** Cast Aluminum Flat Top
- **Crankshaft Type:** Forged Steel
- **Lifter Type:** Hydraulic
- **Intake Valve Material:** Stainless Steel
- **Exhaust Valve Material:** Stainless Steel
- **Hardened Valve Seats:** High Steel Iron Alloy

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

**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):** 20 (508)

**Fuel System**
- **Fuel Type:** Natural Gas, Propane
- **Fuel Injection:** Electronic
- **Fuel Shut Off:** Dual
- **NG Operating Fuel Pressure - in H₂O (kPa):** 5 - 14 (1.2 - 3.5)
- **LP Operating Fuel Pressure - in H₂O (kPa):** 7 - 14 (1.7 - 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

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**ALTERNATOR SPECIFICATIONS**

- **Standard Model:** K0045124Y21
- **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:** Synchronous Brushless
- **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 - NATURAL GAS/PROPANE VAPOR**

<table>
<thead>
<tr>
<th></th>
<th>Standby/Demand Response</th>
<th>Prime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-Phase 120/240 VAC @1.0pf</td>
<td>45 kW/45 kVA</td>
<td>41 kW/41 kVA</td>
</tr>
<tr>
<td>Three-Phase 120/208 VAC @0.8pf</td>
<td>45 kW/56 kVA</td>
<td>41 kW/51 kVA</td>
</tr>
<tr>
<td>Three-Phase 120/240 VAC @0.8pf</td>
<td>45 kW/56 kVA</td>
<td>41 kW/51 kVA</td>
</tr>
<tr>
<td>Three-Phase 277/480 VAC @0.8pf</td>
<td>45 kW/56 kVA</td>
<td>41 kW/51 kVA</td>
</tr>
</tbody>
</table>

**MOTOR STARTING CAPABILITIES (skVA)**

<table>
<thead>
<tr>
<th></th>
<th>skVA vs. Voltage Dip</th>
<th>277/480 VAC</th>
<th>30%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>08/240 VAC</td>
<td>30%</td>
</tr>
<tr>
<td>K0045124Y21</td>
<td>98</td>
<td>K0050124Y21</td>
<td>75</td>
</tr>
<tr>
<td>K0060124Y21</td>
<td>124</td>
<td>K0060124Y21</td>
<td>95</td>
</tr>
</tbody>
</table>

**FUEL CONSUMPTION RATES***

<table>
<thead>
<tr>
<th></th>
<th>Natural Gas – scf/h (m³/hr)</th>
<th>LP Vapor – scf/h (m³/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent Load</td>
<td>Standby/Demand Response</td>
<td>Prime</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25%</td>
<td>195 (5.5)</td>
<td>201 (5.7)</td>
</tr>
<tr>
<td>50%</td>
<td>322 (9.1)</td>
<td>298 (8.4)</td>
</tr>
<tr>
<td>75%</td>
<td>427 (12.1)</td>
<td>394 (11.2)</td>
</tr>
<tr>
<td>100%</td>
<td>554 (15.7)</td>
<td>495 (14.0)</td>
</tr>
</tbody>
</table>

**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) - Open Set</td>
<td>scf/h (m³/min)</td>
<td>3,511 (99.4)</td>
</tr>
<tr>
<td>Coolant Flow</td>
<td>gpm (Lpm)</td>
<td>37.7 (142.7)</td>
</tr>
<tr>
<td>Coolant System Capacity</td>
<td>gal (L)</td>
<td>3 (11.4)</td>
</tr>
<tr>
<td>Maximum Operating Ambient Temperature Before Derate</td>
<td>°F (°C)</td>
<td>122 (50)</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></th>
<th>Standby/Demand Response</th>
<th>Prime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow at Rated Power - scf/h (m³/min)</td>
<td>90.3 (2.6)</td>
<td>82.1 (2.3)</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>69</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>113 (778)</td>
</tr>
</tbody>
</table>

**EXHAUST**

<table>
<thead>
<tr>
<th></th>
<th>Standby/Demand Response</th>
<th>Prime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exhaust Flow (Rated Output)</td>
<td>scf/h (m³/min)</td>
<td>255.3 (7.2)</td>
</tr>
<tr>
<td>Maximum Allowable 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>1,361 (738)</td>
</tr>
</tbody>
</table>

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

Derate – 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
Demand Response - See Bulletin 10000018250
Prime - See Bulletin 0187510SSB
**DIMENSIONS AND WEIGHTS**

**OPEN SET**

<table>
<thead>
<tr>
<th>L x W x H - in (mm)</th>
<th>78.1 (1,984) x 37.3 (947) x 44.4 (1,128)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight - lbs (kg)</td>
<td>1,675 - 1,748 (760 - 793)</td>
</tr>
</tbody>
</table>

**WEATHER PROTECTED ENCLOSURE**

<table>
<thead>
<tr>
<th>L x W x H - in (mm)</th>
<th>94.8 (2,408) x 38.0 (965) x 57.5 (1,461)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight - lbs (kg)</td>
<td>Steel: 2,160 - 2,233 (980 - 1,013)</td>
</tr>
<tr>
<td></td>
<td>Aluminum: 1,894 - 1,965 (859 - 891)</td>
</tr>
</tbody>
</table>

**LEVEL 1 SOUND ATTENUATED ENCLOSURE**

<table>
<thead>
<tr>
<th>L x W x H - in (mm)</th>
<th>94.8 (2,408) x 38.0 (965) x 57.5 (1,461)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight - lbs (kg)</td>
<td>Steel: 2,258 - 2,329 (1,024 - 1,056)</td>
</tr>
<tr>
<td></td>
<td>Aluminum: 1,987 - 2,061 (901 - 935)</td>
</tr>
</tbody>
</table>

**LEVEL 2 SOUND ATTENUATED ENCLOSURE**

<table>
<thead>
<tr>
<th>L x W x H - in (mm)</th>
<th>94.8 (2,408) x 38.0 (965) x 57.5 (1,461)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight - lbs (kg)</td>
<td>Steel: 2,341 - 2,414 (1,062 - 1,095)</td>
</tr>
<tr>
<td></td>
<td>Aluminum: 2,071 - 2,144 (939 - 972)</td>
</tr>
</tbody>
</table>

* 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.