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.

**Standby Power Rating**
625 kW, 781 kVA, 60 Hz

**Demand Response Power Rating**
625 kW, 781 kVA, 60 Hz

**Prime Power Rating**
563 kW, 703 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**
**MG625 | 33.9L | 625 kW**

**INDUSTRIAL SPARK-IGNITED GENERATOR SET**

EPA Certified Stationary Emergency and Non-Emergency

---

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

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

**Cooling System**
- Closed Coolant Recovery System
- Factory-Installed Radiator
- 50/50 Ethylene Glycol Antifreeze
- Radiator Drain Extension

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

**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
  - 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

**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)

**GENERATOR SET**
- Spring Isolators Under Frame
- Separation of Circuits - High/Low Voltage
- Separation of Circuits - Multiple Breakers
- Wrapped Exhaust Piping
- Standard Factory Testing
- 2 Year Limited Warranty (Standby or Demand Response Rated Units)
- 1 Year Limited Warranty (Prime Rated Units)
- Ready to Accept Full 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

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**PARALLELING CONTROLS**
- Auto-Synchronization Process
- Isochronous Load Sharing
- Reverse Power Protection

**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

**Optional Programmable Logic Full Auto Back-Up Controls (PLS)**
- Shunt Trip and Auxiliary Contact

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**STANDARD FEATURES**

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**DEMAND RESPONSE READY**

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**APPLICATIONS**

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**SPEC SHEET**

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2 of 6
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

ALTERNATOR SYSTEM
- Alternator Upsizing
- Anti-Condensation Heater

FUEL SYSTEM
- Flexible Fuel Line
- NPT Flexible Fuel Line

CIRCUIT BREAKER OPTIONS
- Main Line Circuit Breaker
- Electronic Trip Breakers

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

ENCLOSURE
- Weather Protected Enclosure
- 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)

ENGINEERED OPTIONS

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

GENERATOR SET
- Special Testing
- Battery Box

ALTERNATOR SYSTEM
- Unit Mounted Load Banks
- Medium Voltage Alternators

ENCLOSURE
- Door Open Alarm Switch

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
- 100 dB Alarm Horn
- 120V GFCI and 240V Outlets
- Permissive/Load Shed Module
- Damper Alarm Contacts (With Motorized Dampers Only)

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

<table>
<thead>
<tr>
<th>Make</th>
<th>Generac</th>
</tr>
</thead>
<tbody>
<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

| Governor | Electronic |
| Frequency Regulation (Steady State) | ±0.25% |

### Lubrication System

| Oil Pump Type | Gear Driving |
| Oil Filter Type | Full Flow Spin-on Cartridge |
| Crankcase Capacity with Filter - qt (L) | 126.8 (120) |

### Cooling System

| Cooling System Type | Forced Circulation by Centrifugal Pump |
| Fan Type | Pusher |
| Fan Speed - RPM | 1,080 |
| Fan Diameter - in (mm) | 64 (1.626) |

### Fuel System

| Fuel Type | Natural Gas |
| Carburetor | Down Draft |
| Secondary Fuel Regulator | Standard |
| Fuel Shut Off Solenoid | Standard |
| Operating Fuel Pressure - in H₂O (kPa) | 14 - 20 (3.5 - 5.0) |

### Engine Electrical System

| System Voltage | 24 VDC |
| Battery Charger Alternator | Standard |
| Battery Size | See Battery Index 0161970SBY |
| Battery Voltage | (4) - 12 VDC |
| Ground Polarity | Negative |

## ALTERNATOR SPECIFICATIONS

| Standard Model | K0732124Y22 |
| 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 | Single |
| 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% |
## OPERATING DATA

### POWER RATINGS

<table>
<thead>
<tr>
<th></th>
<th>Standby/Demand Response</th>
<th>Prime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three-Phase 277/480 VAC @0.8pf</td>
<td>625 kW/781 kVA Amps: 941</td>
<td>563 kW/704 kVA Amps: 847</td>
</tr>
<tr>
<td>Three-Phase 346/600 VAC @0.8pf</td>
<td>625 kW/781 kVA Amps: 753</td>
<td>563 kW/704 kVA Amps: 678</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>
</tr>
</thead>
<tbody>
<tr>
<td>K0732124Y22</td>
<td>2,450</td>
<td></td>
</tr>
<tr>
<td>K0912124Y22</td>
<td>3,250</td>
<td></td>
</tr>
</tbody>
</table>

### FUEL CONSUMPTION RATES *

Natural Gas – scfh (m³/hr) at Standard Conditions 68 °F (20 °C), 14.7 psi (101 kPa)

<table>
<thead>
<tr>
<th>Percent Load</th>
<th>Standby/Demand Response</th>
<th>Prime</th>
</tr>
</thead>
<tbody>
<tr>
<td>25%</td>
<td>2,436 (69.0)</td>
<td>Contact Factory</td>
</tr>
<tr>
<td>50%</td>
<td>3,714 (105.2)</td>
<td>Contact Factory</td>
</tr>
<tr>
<td>75%</td>
<td>4,998 (141.5)</td>
<td>Contact Factory</td>
</tr>
<tr>
<td>100%</td>
<td>6,282 (177.9)</td>
<td>Contact Factory</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) - Open Set</td>
<td>cfm (m³/min)</td>
<td>34,000 (962.8)</td>
</tr>
<tr>
<td>Coolant Flow</td>
<td>gpm (Lpm)</td>
<td>291 (1,101)</td>
</tr>
<tr>
<td>Coolant System Capacity</td>
<td>gal (L)</td>
<td>55 (208)</td>
</tr>
<tr>
<td>Maximum Operating Ambient Temperature °F (°C)</td>
<td>122 (50)</td>
<td></td>
</tr>
<tr>
<td>Maximum Operating Ambient Temperature (Before Derate)</td>
<td>See Bulletin No. 0199270SSD</td>
<td></td>
</tr>
<tr>
<td>Maximum Additional Radiator Backpressure in H₂O (kPa)</td>
<td>0.5 (0.12) 0.5 (0.12)</td>
<td></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 - cfm (m³/min)</td>
<td>1,394 (39.5)</td>
<td>Contact Factory</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 RPM</td>
<td>1,800</td>
<td>1,800</td>
</tr>
<tr>
<td>Horsepower at Rated kW** hp</td>
<td>941</td>
<td>847</td>
</tr>
<tr>
<td>Piston Speed ft/min (m/min)</td>
<td>1,890 (576)</td>
<td>1,890 (576)</td>
</tr>
<tr>
<td>BMEP psi (kPa)</td>
<td>188 (1,301)</td>
<td>169 (1,165)</td>
</tr>
</tbody>
</table>

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

### EXHAUST

<table>
<thead>
<tr>
<th></th>
<th>Standby/Demand Response</th>
<th>Prime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exhaust Flow (Rated Output) cfm (m³/min)</td>
<td>4,067 (115)</td>
<td>Contact Factory</td>
</tr>
<tr>
<td>Maximum Allowable Backpressure (Post Silencer) inHg (kPa)</td>
<td>0.75 (2.54)</td>
<td>Contact Factory</td>
</tr>
<tr>
<td>Exhaust Temperature (Rated Output) °F (°C)</td>
<td>1,116 (602.2)</td>
<td>Contact Factory</td>
</tr>
</tbody>
</table>

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

OPEN SET
L x W x H - in (mm) 178.3 (4,528) x 82.6 (2,098) x 110.3 (2,801)
Weight - lbs (kg) 14,352 - 14,932 (6,510 - 6,733)

WEATHER PROTECTED ENCLOSURE
L x W x H - in (mm) 203.0 (5,156) x 98.0 (2,489) x 156.5 (3,975)
Weight - lbs (kg) Steel: 18,051 - 18,631 (8,188 - 8,451)
Aluminum: 17,220 - 17,800 (7,811 - 8,074)

LEVEL 1 SOUND ATTENUATED ENCLOSURE
L x W x H - in (mm) 285.0 (7,239) x 90.9 (2,310) x 156.5 (3,975)
Weight - lbs (kg) Steel: 21,876 - 22,456 (9,923 - 10,186)
Aluminum: 19,193 - 19,773 (8,906 - 8,969)

LEVEL 2 SOUND ATTENUATED ENCLOSURE
L x W x H - in (mm) 339.9 (8,634) x 151.7 (3,852) x 156.5 (3,975)
Weight - lbs (kg) Steel: 22,901 - 23,481 (10,388 - 10,651)
Aluminum: 19,634 - 20,214 (8,906 - 8,169)

* 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.