

### Standby Power Rating

600 kW, 750 kVA, 60 Hz

### Prime Power Rating\*

540 kW, 675 kVA, 60 Hz



\*Assembled in the USA using domestic and foreign parts

\*EPA Compliant Prime ratings are not available in the US or its Territories

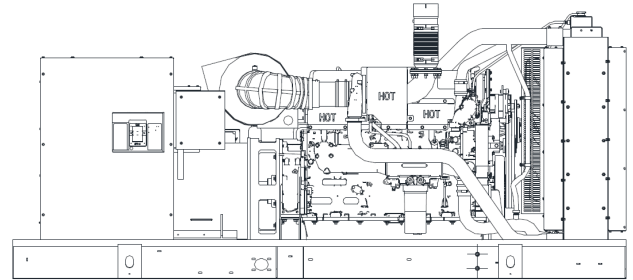


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## Codes and Standards

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



UL2200, UL6200, UL1236, UL489,  
UL142



CSA C22.2, ULC S601, B149



BS5514 and DIN 6271



SAE J1349



NFPA 37, 70, 99, 110



NEC700, 701, 702, 708



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 Bi-Fuel™ generators start on diesel fuel and add natural gas as load is applied until the unit runs primarily on natural gas. Generac's Bi-Fuel generators are fully integrated solutions, not aftermarket conversions in the field. That means every component is specifically designed, engineered and factory-validated to work together. Generac Bi-Fuel generators have the added benefit of being EPA-compliant from the factory.

### RISK MITIGATION VIA FUEL REDUNDANCY

Because nobody can predict how long a power outage will last, many diesel-fueled standby power systems are sized for extended running times. Nevertheless, onsite diesel fuel supplies are limited, and infrastructure damage could make refueling difficult. Generac Bi-Fuel generators make the most of an onsite diesel fuel supply by running primarily on natural gas. That means less onsite diesel fuel is required and running times will be greatly extended compared to diesel-only solutions. And because the natural gas infrastructure tends not to be affected by the same conditions that lead to power outages, fuel reliability is improved.

### LOWER TOTAL COST OF OWNERSHIP

Because natural gas costs less than diesel, fuel costs are significantly reduced over the long term. And since less onsite diesel fuel is required for long running times, installation, operational and maintenance costs are reduced.

### SCALABILITY AS PART OF A MODULAR POWER SYSTEM

Generac Bi-Fuel generators can be configured as part of a Modular Power System (MPS)—connected via integrated paralleling with other Generac generators. This makes the system scalable, meaning there is no need to install more power than you need.

### CODE COMPLIANCE

Generac Bi-Fuel generators meet the onsite fuel requirements for emergency systems as referenced in NEC700 and NFPA 110. Less onsite diesel fuel means easier permitting. And indoor fuel installations with capacity limits per NFPA or local codes become a viable option.

## STANDARD FEATURES

### ENGINE SYSTEM

- Oil Drain Extension
- Air Cleaner
- Level 1 Fan and Belt Guards (Open Set Only)
- Stainless Steel Flexible Exhaust Connection
- Critical Silencer (Enclosed Units Only)
- Factory Filled Oil and Coolant

### FUEL SYSTEM

- Primary and Secondary Fuel Shutoff
- Primary and Secondary Fuel Filters

### COOLING SYSTEM

- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Factory-Installed Radiator
- 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

- Class H Insulation Material
- 2/3 Pitch
- Skewed Stator
- Permanent Magnet Excitation
- Amortisseur Winding
- 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 (Enclosed Units Only)
- Standard Factory Testing
- 2 Year Limited Warranty (Standby Rated Units)
- 1 Year Limited Warranty (Prime Rated Units)
- Silencer Mounted in the Discharge Hood (Enclosed Units Only)

### ENCLOSURE (If Selected)

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

### TANK (If Selected)

- UL 142/ULC S601
- Double Wall
- Vents
- Sloped Top
- Sloped Bottom
- Factory Pressure Tested (2 psi)
- Rupture Basin Alarm
- Fuel Level
- Check Valve in Supply and Return Lines
- RhinoCoat™ - Textured Polyester Powder Coat Paint
- Stainless Hardware

### CONTROL SYSTEM



### Digital G Paralleling Control Panel - Touchscreen

#### Program Functions

- Programmable Crank Limiter
- 7-Day Programmable Exerciser
- Special Applications Programmable Logic Controller
- RS-232/485 Communications
- All Phase Sensing Digital Voltage Regulator

- 2-Wire Start Capability
- Date/Time Fault History (Event Log)
- Isochronous Governor Control
- Waterproof/Sealed Connectors
- Audible Alarms and Shutdowns
- Not in Auto (Flashing Light)
- Auto/Off/Manual Switch
- E-Stop (Red Mushroom-Type)
- NFPA110 Level I and II (Programmable)
- Customizable Alarms, Warnings, and Events
- Modbus® Protocol
- Predictive Maintenance Algorithm
- Sealed Boards
- Password Parameter Adjustment Protection
- Single Point Ground
- 16 Channel Remote Trending
- 0.2 msec High Speed Remote Trending
- Alarm Information Automatically Annunciated on the Display

#### Full System Status Display

- Power Output (kW)
- Power Factor

- kW Hours, Total and Last Run
- Real/Reactive/Apparent Power
- All Phase AC Voltage
- All Phase Currents
- Oil Pressure
- Coolant Temperature
- Coolant Level
- Engine Speed
- Battery Voltage
- Frequency

#### Alarms and Warnings

- Oil Pressure
- Coolant Temperature
- Coolant Level
- Low Fuel Pressure
- Engine Overspeed
- Battery Voltage
- Alarms and Warnings Time and Date Stamped
- Snap Shots of Key Operation Parameters During
- Alarms and Warnings
- Alarms and Warnings Spelled Out (No Alarm Codes)

### PARALLELING CONTROLS

- Auto-Synchronization Process
- Isochronous Load Sharing
- Reverse Power Protection

- Maximum Power Protection
- Electrically Operated, Mechanically Held Paralleling Switch
- Sync Check System

- Optional Programmable Logic Full Auto Back-Up Controls (PLS)
- Independent On Board Paralleling
- Shunt Trip and Auxiliary Contact

**CONFIGURABLE OPTIONS****ENGINE SYSTEM**

- Level 1 Fan and Belt Guards (Enclosed Units Only)
- Oil Heater
- Engine Coolant Heater
- Shipped Loose Critical Silencer (Open Set Only)
- Radiator Stone Guard (Open Set Only)

**FUEL SYSTEM**

- NPT Flexible Fuel Line

**ELECTRICAL SYSTEM**

- 10A UL Listed Battery Charger
- Battery Warmer

**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 Breakers

**GENERATOR SET**

- Extended Factory Testing (3-Phase Only)
- IBC Seismic Certification
- 8 Position Load Center

**ENCLOSURE**

- Weather Protected Enclosure
- Level 1 Sound Attenuation
- Level 2 Sound Attenuation
- Level 2 Sound Attenuation with Motorized Dampers
- Steel Enclosure
- Aluminum Enclosure
- Up to 200 MPH Wind Load Rating (Contact Factory for Availability)
- AC/DC Enclosure Lighting Kit
- Enclosure Heater

**CONTROL SYSTEM**

- NFPA 110 Compliant Level 1 21-Light Annunciator
- Remote Relay Assembly (8 or 16)
- Oil Temperature Indication and Alarm
- Remote E-Stop (Break Glass-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Flush Mount)
- Remote Communication - Modem
- 10A Engine Run Relay
- Ground Fault Annunciator
- 100 dB Alarm Horn
- 120 V GFCI and 240 V Outlets
- Damper Alarm Contacts (with Motorized Dampers Only)

**WARRANTY (Standby Gensets Only)**

- 2 Year Extended Limited Warranty
- 5 Year Extended Limited Warranty
- 7 Year Extended Limited Warranty
- 10 Year Extended Limited Warranty

**ENGINEERED OPTIONS****ENGINE SYSTEM**

- Fluid Containment Pan

**ALTERNATOR SYSTEM**

- 3<sup>rd</sup> Breaker System

**CONTROL SYSTEM**

- Battery Disconnect Switch

**GENERATOR SET**

- Special Testing

**FUEL TANKS**

- UL 2085 Tank
- Stainless Steel Tank
- Special Fuel Tanks (MIDEQ and FL DEP/DERM, etc.)
- Vent Extensions

## APPLICATION AND ENGINEERING DATA

## ENGINE SPECIFICATIONS

## General

|                                    |                          |
|------------------------------------|--------------------------|
| Make                               | Perkins                  |
| EPA Emissions Compliance           | Stationary Emergency     |
| EP Emissions Reference             | See Emission Data Sheet  |
| Cylinder #                         | 6                        |
| Type                               | In-Line                  |
| Displacement - in <sup>3</sup> (L) | 1,106.36 (18.13)         |
| Bore - in (mm)                     | 5.71 (145)               |
| Stroke - in (mm)                   | 7.20 (183)               |
| Compression Ratio                  | 14.5:1                   |
| Intake Air Method                  | Turbocharged/Aftercooled |
| Cylinder Head Type                 | 4-Valve                  |
| Piston Type                        | Aluminum                 |
| Crankshaft Type                    | I-Beam Section           |

## Engine Governing

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

## Lubrication System

|                            |            |
|----------------------------|------------|
| Oil Pump Type              | Gear       |
| Oil Filter Type            | Full-Flow  |
| Crankcase Capacity: qt (L) | 47.55 (45) |

## Cooling System

|                        |                               |
|------------------------|-------------------------------|
| Cooling System Type    | Closed Recovery               |
| Water Pump Type        | Centrifugal Type, Belt-Driven |
| Fan Type               | Pusher                        |
| Fan Speed (RPM)        | 1,439                         |
| Fan Diameter - in (mm) | 38 (965)                      |

## Fuel System

|  |                            |
|--|----------------------------|
| Fuel Type  | Ultra Low Sulfur Diesel #2 |
| Carburetor   | ASTM                       |
| Fuel Filtering (Microns)   | Primary 10 - Secondary 2   |
| Fuel Inject Pump   | Electronic                 |
| Injector Type  | MEUI                       |
| Engine Type  | Pre-Combustion             |
| Fuel Supply Line - in (mm)   | 0.5 (12.7) NPT             |
| Fuel Return Line - in (mm)   | 0.5 (12.7) NPT             |
| Required Natural Gas Pressure - psi (kPa)                                  | 1 (7)                      |
| Maximum Required Volume of Natural Gas Needed - scfm (m <sup>3</sup> /min) | 50 (15)                    |

## Engine Electrical System

|                            |                                 |
|----------------------------|---------------------------------|
| System Voltage             | 24 VDC                          |
| Battery Charger Alternator | 70 Amps                         |
| Battery Size               | See Battery Index<br>0161970SBY |
| Battery Voltage            | (2) -12 VDC                     |
| Ground Polarity            | Negative                        |

## ALTERNATOR SPECIFICATIONS

|                                     |             |
|-------------------------------------|-------------|
| Standard Model                      | K0792124Y23 |
| Poles                               | 4           |
| Field Type                          | Revolving   |
| Insulation Class - Rotor            | H           |
| Insulation Class - Stator           | H           |
| Total Harmonic Distortion           | <3%         |
| Telephone Interference Factor (TIF) | <50         |

|                                    |                          |
|------------------------------------|--------------------------|
| Standard Excitation                | Permanent Magnet         |
| Bearings                           | Single Sealed Cartridge  |
| 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

|                                 |        | Standby     |
|---------------------------------|--------|-------------|
| Single-Phase 120/240 VAC @1.0pf | 600 kW | Amps: 2,081 |
| Three-Phase 120/240 VAC @0.8pf  | 600 kW | Amps: 1,804 |
| Three-Phase 277/480 VAC @0.8pf  | 600 kW | Amps: 903   |
| Three-Phase 346/600 VAC @0.8pf  | 600 kW | Amps: 723   |

## MOTOR STARTING CAPABILITIES (skVA)

| skVA vs. Voltage Dip |       |             |       |
|----------------------|-------|-------------|-------|
| 277/480 VAC          | 30%   | 208/240 VAC | 30%   |
| K0792124Y23          | 2,250 | K0792124Y23 | 2,000 |
| K0832124Y23          | 2,800 | K0832124Y23 | 2,090 |

## FUEL CONSUMPTION RATES\*

| Fuel Pump Lift - ft (m)                                | Diesel - gph (Lph) |              |
|--|--------------------|--------------|
|  | Percent Load       | Standby      |
| 12 (3.7)   | 25%                | 18.4 (69.7)  |
|  | 50%                | 28.2 (88.7)  |
| Total Fuel Pump Flow (Combustion + Return) - gph (Lph) | 75%                | 35.6 (124.8) |
| 121 (457)  | 100%               | 41.4 (156.7) |

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

\*\* Natural Gas substitution may vary based on the application and load conditions

Please consult factory for additional details on fuel consumption

## COOLING

|   |                             | Standby         |
|---|-----------------------------|-----------------|
| Coolant Flow  | gpm (Lpm)                   | 114.1 (432)     |
| Coolant System Capacity                               | gal (L)                     | 15.5 (58.6)     |
| Heat Rejection to Coolant                             | BTU/hr (kW)                 | 1,589,760 (466) |
| Inlet Air   | cfm (m <sup>3</sup> /min)   | 30,088 (852)    |
| Maximum Operating Ambient Temperature                 | °F (°C)                     | 122 (50)        |
| Maximum Operating Ambient Temperature (Before Derate) | See Bulletin No. 0199270SSD |                 |
| Maximum Additional Radiator Backpressure              | in H <sub>2</sub> O (kPa)   | 0.5 (0.12)      |

## COMBUSTION AIR REQUIREMENTS

|   | Standby    |
|---|------------|
| Flow at Rated Power cfm — (m <sup>3</sup> /min) | 1,836 (52) |

## ENGINE

|                          |                | Standby     |
|--------------------------|----------------|-------------|
| Rated Engine Speed       | RPM            | 1,800       |
| Horsepower at Rated kW** | hp             | 122         |
| Piston Speed             | ft/min (m/min) | 2,161 (659) |
| BMEP                     | psi (kPa)      | 361 (2,489) |

\*\* Refer to "Emissions Data Sheet" for maximum bHP for EPA and SCAQMD permitting purposes.

## EXHAUST

|   |                           | Standby     |
|---|---------------------------|-------------|
| Exhaust Flow (Rated Output)                 | cfm (m <sup>3</sup> /min) | 5,085 (144) |
| Maximum Exhaust Backpressure (Post Turbo)   | inHG (kPa)                | 2.13 (6.9)  |
| Exhaust Temp (Rated Output - Post Silencer) | °F (°C)                   | 1,155 (624) |

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 BS5514 and DIN6271 standards.

Standby - See Bulletin 0187500SSB

DIMENSIONS AND WEIGHTS\*



| OPEN SET         |                  | Usable Capacity - gal (L) | L x W x H - in (mm)                          | Weight - lbs (kg)               |
|------------------|------------------|---------------------------|--|---------------------------------|
| Run Time - Hours | Run Time - Hours |                           |  |                                 |
| No Tank          | -                | -                         | 154.4 (3,923) x 71.0 (1,803) x 67.3 (1,709)  | 8,662 - 10,922 (3 929 - 4,954)  |
| 8                | 334              | 334                       | 158.5 (4,025) x 71.0 (1,803) x 81.3 (2,065)  | 10,337 - 12,667 (4,680 - 5,705) |
| 24               | 1,001            | 1,001                     | 158.5 (4,025) x 71.0 (1,803) x 103.3 (2,623) | 11,262 - 13,522 (5,108 - 6,133) |
| 24               | 1,001            | 1,001                     | 228.0 (5,791) x 71.0 (1,803) x 92.3 (2,344)  | 11,812 - 14,072 (5,358 - 6,383) |
| 48               | 2,002            | 2,002                     | 290.0 (7,366) x 71.0 (1,803) x 103.3 (2,623) | 13,512 - 15,722 (6,129 - 7,154) |

| LEVEL 0 SOUND ATTENUATED ENCLOSURE |                  | Usable Capacity - Gal (L) | L x W x H - in (mm)                          | Weight - lbs (kg) Enclosure Only |             |
|------------------------------------|------------------|---------------------------|--|----------------------------------|-------------|
| Run Time - Hours                   | Run Time - Hours |                           |  | Steel                            | Aluminum    |
| No Tank                            | -                | -                         | 207.4 (5,268) x 70.9 (1,800) x 79.9 (2,031)  | 2,468 (1,119)                    | 1,378 (625) |
| 8                                  | 334              | 334                       | 207.4 (5,268) x 70.9 (1,800) x 93.9 (2,387)  |                                  |             |
| 24                                 | 1,001            | 1,001                     | 207.4 (5,268) x 70.9 (1,800) x 115.9 (2,945) |                                  |             |
| 24                                 | 1,001            | 1,001                     | 228.0 (5,791) x 70.9 (1,800) x 104.9 (2,666) |                                  |             |
| 48                                 | 2,002            | 2,002                     | 290.0 (7,366) x 70.9 (1,800) x 115.9 (2,945) |                                  |             |

| LEVEL 1 SOUND ATTENUATED ENCLOSURE |                  | Usable Capacity - Gal (L) | L x W x H - in (mm)                          | Weight - lbs (kg) Enclosure Only |             |
|------------------------------------|------------------|---------------------------|--|----------------------------------|-------------|
| Run Time - Hours                   | Run Time - Hours |                           |  | Steel                            | Aluminum    |
| No Tank                            | -                | -                         | 247.5 (6,285) x 70.9 (1,800) x 80.0 (2,032)  | 3,472 (1,574)                    | 1,812 (821) |
| 8                                  | 334              | 334                       | 247.5 (6,285) x 70.9 (1,800) x 94.0 (2,388)  |                                  |             |
| 24                                 | 1,001            | 1,001                     | 247.5 (6,285) x 70.9 (1,800) x 116.0 (2,946) |                                  |             |
| 24                                 | 1,001            | 1,001                     | 247.5 (6,285) x 70.9 (1,800) x 105.0 (2,667) |                                  |             |
| 48                                 | 2,002            | 2,002                     | 290.0 (7,366) x 70.9 (1,800) x 116.0 (2,946) |                                  |             |

| LEVEL 2 SOUND ATTENUATED ENCLOSURE |                  | Usable Capacity - Gal (L) | L x W x H - in (mm)                          | Weight - lbs (kg) Enclosure Only |             |
|------------------------------------|------------------|---------------------------|--|----------------------------------|-------------|
| Run Time - Hours                   | Run Time - Hours |                           |  | Steel                            | Aluminum    |
| No Tank                            | -                | -                         | 207.4 (5,268) x 70.9 (1,800) x 114 (2,899)   | 3,810 (1,728)                    | 1,956 (887) |
| 8                                  | 334              | 334                       | 207.4 (5,268) x 70.9 (1,800) x 128.1 (3,255) |                                  |             |
| 24                                 | 1,001            | 1,001                     | 207.4 (5,268) x 70.9 (1,800) x 150.1 (3,813) |                                  |             |
| 24                                 | 1,001            | 1,001                     | 28.0 (5,791) x 70.9 (1,800) x 139.1 (3,534)  |                                  |             |
| 48                                 | 2,002            | 2,002                     | 290.0 (7,366) x 70.9 (1,800) x 150.1 (3,813) |                                  |             |

\*All measurements are approximate and for estimation purposes only.

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

Specification characteristics may change without notice. Dimensions and weights are for preliminary purposes only. Please consult a Generac Power Systems Industrial Dealer for detailed installation drawings.