

**Standby Power Rating**

130 kW, 163 kVA, 60 Hz



\*Assembled in the USA using domestic and foreign parts

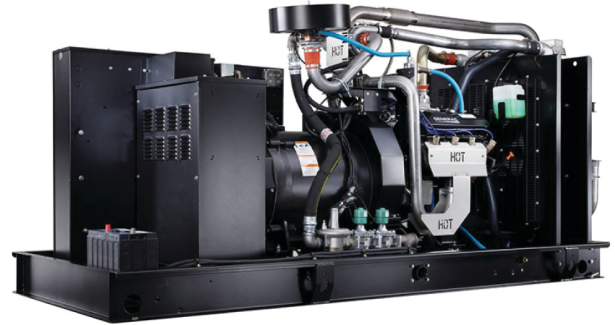


Image used for illustration purposes only

**Codes and Standards**

**Generac products are designed to the following standards:**



UL2200, UL508, UL489



CSA C22.2



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 provides 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 for 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.

## STANDARD FEATURES

### 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 Exhaust Silencer

### FUEL SYSTEM

- Fuel Line - NPT Connection
- 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

- GENprotect™
- Class H Insulation Material
- 2/3 Pitch
- Skewed Stator
- Brushless 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)
- Silencer Mounted in the Discharge Hood (Enclosed Only)

### ENCLOSURE (If Selected)

- Rust-Proof Fasteners with Nylon Washers to Protect Finish
- High Performance Sound-Absorbing Material (Sound Attenuation 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

### CONTROL SYSTEM

#### Digital G-200 Paralleling Control Panel-Touchscreen

#### Program Functions

- Programmable Crank Limiter
- 7-Day Programmable Exerciser
- Special Applications Programmable Logic Controller
- RS-232/485 Communications
- 3 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
- 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
- Independent On-Board Paralleling

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

## CONFIGURABLE OPTIONS

### ENGINE SYSTEM

- Engine Block Heater
- Oil Heater
- Air Filter Restriction Indicator
- Stone Guard (Open Set Only)
- Critical Exhaust Silencer (Open Set Only/Standard on Ultra Low Emissions Option)

### ELECTRICAL SYSTEM

- 2.5A UL Battery Charger
- 10A UL Battery Charger
- Battery Warmer

### ALTERNATOR SYSTEM

- Alternator Upsizing
- Anti-Condensation Heater
- Tropical Coating
- Permanent Magnet Excitation

### FUEL SYSTEM

- Dual Fuel NG/LPV
- Dual Fuel NG/LPL

### CIRCUIT BREAKER OPTIONS

- Main Line Circuit Breaker
- Electronic Trip Breakers

### GENERATOR SET

- GenLink® Communications Software (English Only)
- Extended Factory Testing (3 Phase Only)
- IBC Seismic Certification
- 8 Position Load Center

### ENCLOSURE

- Standard Enclosure
- Level 1 Sound Attenuation
- Level 2 Sound Attenuation
- Steel Enclosure
- Aluminum Enclosure
- AC/DC Enclosure Lighting Kit
- Door Alarm Switch

### CONTROL SYSTEM

- Oil Temperature Sender with Indication 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 Run Relay
- Ground Fault Indication and Protection Functions

### 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

- Coolant Heater Ball Valves
- Fluid Containment Pan

### CONTROL SYSTEM

- Battery Disconnect Switch

### GENERATOR SET

- Special Testing
- Battery Box

### ENCLOSURE

- Motorized Dampers
- Enclosure Ambient Heaters
- Up to 200 MPH Wind Load Rating\*

EPA Certified Stationary Emergency

**APPLICATION AND ENGINEERING DATA**

**ENGINE SPECIFICATIONS**

**General**

Make	Generac
Cylinder #	8
Type	V
Displacement - in <sup>3</sup> (L)	540 (8.9)
Bore - in (mm)	4.49 (114.3)
Stroke - in (mm)	4.25 (107.95)
Compression Ratio	10.5:1
Intake Air Method	Turbocharged/Aftercooled
Number of Main Bearings	5
Connecting Rods	Forged
Cylinder Head	Cast Iron
Cylinder Liners	No
Ignition	High Energy
Piston Type	Aluminum Alloy
Crankshaft Type	Forged Steel
Lifter Type	Hydraulic Roller
Intake Valve Material	Steel Alloy
Exhaust Valve Material	Stainless Steel
Hardened Valve Seats	Yes

**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)	8.0 (8.5)

**Cooling System**

Cooling System Type	Pressurized Closed
Water Pump Flow - gal/min (l/min)	26
Fan Type	Pusher
Fan Speed (RPM)	2,330
Fan Diameter - in (mm)	22 (558)

**Fuel System**

Fuel Type	Natural Gas, Propane Vapor/Liquid
Carburetor	Down Draft
Secondary Fuel Regulator	Standard
Fuel Shut Off Solenoid	Standard (Dual)
Operating Fuel Pressure (NG/LPV)	7"-11" H <sub>2</sub> O
Optional Operating Fuel Pressure (LPL)	30 - 312 psi

\*When designing the external fuel system, assume a 20% safety factor to the upper and lower limit of the specified fuel pressure range to account for site variation and measurement at the generator test port. Refer to Generac 10000046207, latest rev, for proper gas supply guidelines (Contact Factory for Details).

**Engine Electrical System**

System Voltage	12 VDC
Battery Charger Alternator	Standard
Battery Size	See Battery Index 0161970SBY
Battery Voltage	12 VDC
Ground Polarity	Negative

**ALTERNATOR SPECIFICATIONS**

Standard Model	Generac 520
Poles	4
Field Type	Revolving
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion	<5%
Telephone Interference Factor (TIF)	<50

Standard Excitation	Brushless
Bearings	Single Sealed
Coupling	Direct via Flexible Disc
Prototype Short Circuit Test	Yes
Voltage Regulator Type	Full Digital
Number of Sensed Phases	3
Regulation Accuracy (Steady State)	±0.25%

EPA Certified Stationary Emergency

**OPERATING DATA**

**POWER RATINGS**

	Natural Gas		Propane or Dual Fuel (NG + LP)	
Three-Phase 120/208 VAC @0.8pf	130 kW	Amps: 451	130 kW	Amps: 451
Three-Phase 120/240 VAC @0.8pf	130 kW	Amps: 391	130 kW	Amps: 391
Three-Phase 277/480 VAC @0.8pf	130 kW	Amps: 195	130 kW	Amps: 195
Three-Phase 346/600 VAC @0.8pf	130 kW	Amps: 156	130 kW	Amps: 156

**STARTING CAPABILITIES (skVA)**

skVA vs. Voltage Dip

								208/240 VAC							
480 VAC															
Alternator	kW	10%	15%	20%	25%	30%	35%	Alternator	kW	10%	15%	20%	25%	30%	35%
Standard	130	116	174	232	293	348	406	Standard	130	87	131	174	218	261	305
Upsize 1	150	133	199	265	332	398	464	Upsize 1	150	100	146	199	249	299	348
Upsize 2	200	187	280	373	467	560	653	Upsize 2	200	140	210	280	350	420	490

**FUEL CONSUMPTION RATES\***

Natural Gas – ft <sup>3</sup> /hr (m <sup>3</sup> /hr)			Propane Vapor – ft <sup>3</sup> /hr (m <sup>3</sup> /hr)			Propane Liquid – gal/hr	
Percent Load	Standby		Percent Load	Standby		Percent Load	Standby
25%	378 (10.7)		25%	204.2 (5.8)		25%	5.70
50%	791.2 (22.4)		50%	341.8 (9.7)		50%	9.54
75%	1,144.5 (32.4)		75%	470.0 (13.3)		75%	13.12
100%	1,496.0 (42.4)		100%	593.7 (16.8)		100%	16.57

\*1.5X maximum site rated fuel consumption should be used for gas supply design practices. Refer to Generac 10000046207, latest rev., for more information or contact factory for details.

**COOLING**

		Standby
Air Flow (inlet air combustion and radiator)	ft <sup>3</sup> /hr (m <sup>3</sup> /hr)	5,757 (163.0)
Coolant Flow per Minute	gal/min (L/min)	26 (98)
Coolant System Capacity	gal (L)	6.0 (22.7)
Heat Rejection to Coolant	BTU/hr	302,400
Maximum Radiator Backpressure	in H <sub>2</sub> O (kPa)	0.5 (0.12)

**COMBUSTION AIR REQUIREMENTS**

Flow at Rated Power cfm — (m <sup>3</sup> /min)	Standby 349 (9.9)
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**ENGINE**

		Standby
Rated Engine Speed	RPM	1,800
Horsepower at Rated kW**	hp	200
Piston Speed	ft/min	1,275
BMEP	psi	162

\*\* 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)	1,341 (38.0)
Maximum Exhaust Backpressure	inHG (kPa)	0.75 (2.54)
Exhaust Temp (Rated Output - Post Silencer)	°F (°C)	1,112 (600)
Exhaust Size Outlet	in (mm)	3.0" ID Flex (No Silencer)

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 0187500SSBCom

Prime - See Bulletin 0187510SSB

**DIMENSIONS AND WEIGHTS\***



**OPEN SET (Includes Exhaust Flex)**

L x W x H - in (mm) 110 (2,795) x 39.4 (1,000.2) x 54.3 (1,378)  
 Weight - lbs 2,674 (1,213)

**STANDARD ENCLOSURE**

L x W x H - in (mm) 132.72 (3,371.1) x 40.46 (1,027.8) x 64.05 (1,627)  
 Weight - lbs Steel: 3,434 (1,558)  
 Aluminum: 3,055 (1,386)

**LEVEL 1 ACOUSTIC ENCLOSURE**

L x W x H - in (mm) 154.13 (3,914.9) x 40.46 (1,027.8) x 64.05 (1,627)  
 Weight - lbs Steel: 3,670 (1,665)  
 Aluminum: 3,157 (1,432)

**LEVEL 2 ACOUSTIC ENCLOSURE**

L x W x H - in (mm) 144.53 (3,671) x 40.46 (1,027.8) x 80.88 (2,054.3)  
 Weight - lbs Steel: 3,789 (1,719)  
 Aluminum: 3,207 (1,455)

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

<b>YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER</b>

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.