## INDUSTRIAL SPARK-IGNITED GENERATOR SET

**EPA Certified Stationary Emergency** 









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

Image used for illustration purposes only

## **CODES AND STANDARDS**

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



UL2200, UL508, UL489



CSA C22.2, B149





BS5514 and DIN 6271



**SAE J1349** 



NFPA 37, 70, 99, 110



NEC 700, 701, 702, 708



ISO 3046, 8528, 9001



NEMA ICS1, ICS10, MG1, 250, ICS6, AB1



ANSI/IEEE 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. But 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. Because 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.

SPEC SHEET

## INDUSTRIAL SPARK-IGNITED GENERATOR SET

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#### STANDARD FEATURES

## **ENGINE SYSTEM**

- · Oil Drain Extension
- · Air Cleaner
- · Fan Guard
- · Stainless Steel Flexible Exhaust Connection
- · Factory Filled Oil & Coolant
- · Radiator Duct Adapter (Open Set Only)
- · Critical Exhaust Silencer/Catalyst

## **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
- UV/Ozone Resistant Hoses

## **Electrical System**

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

#### ALTERNATOR SYSTEM

- · Main Line Circuit Breaker
- UL2200 GENprotect™ Fault Protector
- · Class H Insulation Material
- 2/3 Pitch
- · Skewed Stator
- · Brushless Excitation
- Sealed Bearings
- · Amortisseur Winding
- Low Temperature Rise ≤120°C

#### **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)
- Capable to Accept Full Load in <10 Seconds
- 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 Attenuation Enclosures)
- Gasketed Doors
- · Stamped Air-Intake Louvers
- Upward Facing Discharge Hoods (Radiator and Exhaust)
- 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
- All-Phase Sensing Digital Voltage Regulator
- · Utility Monitoring
- 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
- 0.2msec High Speed Remote Trending
- Alarm Information Automatically Annunciated on the Display

## **Full System Status Display**

- Power Output (kW)
- · Power Factor
- kW Hours, Total & Last Run
- Real/Reactive/Apparent Power
- All Phase AC Voltage
- All Phase Currents
- Oil Pressure
- Coolant Temperature
- · Coolant Level
- Engine SpeedBattery Voltage
- Frequency

## **Alarms and Warnings**

- · Oil Pressure
- Coolant Temperature
- · Coolant Level
- · Low Fuel Pressure
- Engine OverspeedBattery Voltage
- · Alarms & Warnings Time and Date Stamped
- Snap Shots of Key Operation Parameters During
- · Alarms & 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

## INDUSTRIAL SPARK-IGNITED GENERATOR SET

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#### **CONFIGURABLE OPTIONS**

#### **ENGINE SYSTEM**

- o Engine Block Heater
- o Extreme Cold Weather Kit
- o Oil Heater
- o Air Filter Restriction Indicator
- o Radiator Stone Guard (Open Set Only)

#### **ELECTRICAL SYSTEM**

- o 10A UL Battery Charger
- Battery Warmer

#### **FUEL SYSTEM**

o NPT Flexible Fuel Line

## **ALTERNATOR SYSTEM**

- o Alternator Upsizing
- o Anti-Condensation Heater
- o Topical Alternator Coating
- o Permanent Magnet Excitation

#### **GENERATOR SET**

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

#### MAIN LINE CIRCUIT BREAKER OPTIONS

- o 2nd Main Line Circuit Breaker
- o Electronic Trip Breakers

## **CONTROL SYSTEM**

- Oil Temperature Indication and Alarm
- o Remote E-Stop (Break Glass-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Surface Mount)
- o Remote E-Stop (Red Mushroom-Type, Flush Mount)
- o 10A Engine Run Relay
- o Ground Fault Annunciator
- o Damper Alarm Contacts
- o 100dB Alarm Horn
- o 120V GFCI and 240V Outlets
- Auxiliary Circuit Breaker Contacts to Controller

#### **ENCLOSURE**

- o Weather Protected Enlcosure
- o Level 1 Sound Attenuation
- o Level 2 Sound Attenuation
- o Level 2 Sound Attenuation with Motorized Dampers
- o Steel Enclosure
- o Aluminum Enclosure
- o AC/DC Enclosure Lighting Kit
- o Door Alarm Switch
- o Enclosure Ambient Heaters
- Up to 200 MPH Wind Load Rating\* (Consult Factory for Availability)

## **WARRANTY (Standby Gensets Only)**

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

## **ENGINEERED OPTIONS**

## **CONTROL SYSTEM**

o Battery Disconnect Switch

#### **ALTERNATOR SYSTEM**

o Unit Mounted Load Banks

## **GENERATOR SET**

- $\circ \ \ \text{Special Testing}$
- o Battery Box



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## **APPLICATION AND ENGINEERING DATA**

## **ENGINE SPECIFICATIONS**

General

GOTTOT CIT		
Make	Generac	
Cylinder #	8	
Туре	V	
Displacement - in <sup>3</sup> (L)	540 (8.9)	
Bore - in (mm)	4.49 (114.23)	
Stroke - in (mm)	4.25 (107.15)	
Compression Ratio	10.5:1 - G18	9.1:1 - G26
Intake Air Method	Turbocharged/Afterc	ooled
Number of Main Bearings	5	
Cylinder Head	Forged Steel	
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		
0	Electrical a	
Governor	Electronic	
Frequency Regulation (Steady State)	±0.25%	
Lubrication System		
Oil Pump Type	Gear	
Oil Filter Type	Full-Flow Spin-On Ca	ırtridge
Crankcase Capacity with Filters - L (qts)	8.5 (8.0) - G18	9.5 (10.0) - G26

## Cooling System

Cooling System Type	Pressurized Closed
Fan Type	Pusher
Fan Speed (rpm)	2,330
Fan Diameter - in (mm)	22 (558)

## Fuel System

Fuel Type	Natural Gas
Carburetor	Down Draft
Secondary Fuel Regulator	Standard
Fuel Shut Off Solenoid	Standard
Operating Fuel Pressure NG/LPV- H <sub>2</sub> O (kPa)	7-11 (1.7- 2.7)
Operating Fuel Pressure LPL- psi (kPa)	30 - 312 (206 - 2.151)

## Engine Electrical System

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

NOTE: G18 is all engines manufactured before August 3rd, 2018. G26 is all engines manufactured after August 3rd, 2018.

## **ALTERNATOR SPECIFICATIONS**

Standard Model	K0130124Y21
Poles	4
Field Type	Rotating
Insulation Class - Rotor	Н
Insulation Class - Stator	Н
Total Harmonic Distortion	<5% (3-Phase)
Telephone Interference Factor (TIF)	<50

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

# MG130 | 9.0L | 130kW

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## **OPERATING DATA**

## POWER RATINGS- NATURAL GAS/PROPANE/DUAL FUEL

	Standby	
Three-Phase 120/208 VAC @0.8pf	130 kW	Amps: 451
Three-Phase 120/240 VAC @0.8pf	130 kW	Amps: 391
Three-Phase 277/480 VAC @0.8pf	130 kW	Amps: 195
Three-Phase 346/600 VAC @0.8pf	130 kW	Amps: 156

## **MOTOR STARTING CAPABILITIES (skVA)**

#### skVA vs. Voltage Dip

277/480 VAC	30%	208/480 VAC	30%
K0130124Y21	327	K0130124Y21	327
K0150124Y21	326	K0150124Y21	244
K0200124Y21	478	K0200124Y21	361

## **FUEL CONSUMPTION RATES**

Natural Gas	s – cfh (m³/hr)	Propane Vapor	Propane Vapor - cfh (m³/hr)		gal/hr (l/hr)
Percent Load	Standby	Percent Load	Standby	Percent Load	Standby
25%	635 (18.0)	25%	270 (7.6)	25%	6.5 (24.6)
50%	1,005 (28.4)	50%	390 (11.0)	50%	10.1 (38.2)
75%	1,401 (39.7)	75%	516 (14.6)	75%	14.0 (53.0)
100%	1,797 (50.9)	100%	642 (18.2)	100%	17.7 (67.0)

<sup>\*</sup> Fuel supply installation must accommodate fuel consumption rates at 100% load.

## **COOLING**

		Standby
Air Flow (Fan Air Flow Across Radiator)	scfm (m³/min)	5,415 (153.3)
Coolant Flow	gpm (Lpm)	27.5 (104)
Coolant System Capacity	gal (L)	6.34 (24.0)
Max. Operating Ambient Temperature	°F (°C)	122 (50)
Maximum Operating Ambient Temperature (Before Derate)	See Bulletin No. 0	199270SSD
Maximum Radiator Backpressure	in H <sub>2</sub> O (kPa)	0.50 (0.12)

## **COMBUSTION AIR REQUIREMENTS**

Standby

Flow at Rated Power scfm (m3/min) 371 (10.5)

ENGINE			EXHAUST			
Standby				Standby		
Rated Engine Speed	rpm	1,800		Exhaust Flow (Rated Output)	scfm (m³/min)	1,199 (34)
Horsepower at Rated kW**	hp	200- G18	205- G26	Max. Backpressure (Post Silencer)	inHg (kPa)	0.75 (2.54)
Piston Speed	ft/min (m/min)	1,275 (389	3)	Exhaust Temp (Rated Output - Post Silencer)	°F (°C)	1,285 (696)
BMEP	psi (kPa)	166 (1145	)			

Standby - See Bulletin - 1000001893

<sup>\*\*</sup> 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.

# MG130

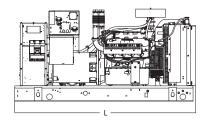
#### 9.0L 130kW

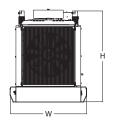
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# GENERAC | INDUSTRIAL

## **DIMENSIONS AND WEIGHTS\***†

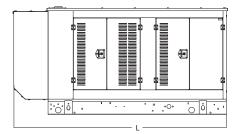


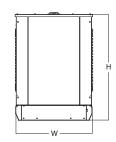


## **OPEN SET (Includes Exhaust Flex)**

110.0 (2,795) x 39.9 (1,013) x 54.3 (1,379) L x W x H - in (mm)

Weight - Ibs (kg) 2,674 (1,213)

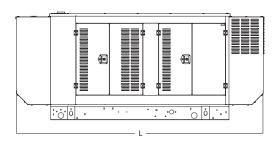


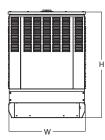


## WEATHER PROTECTED ENCLOSURE

L x W x H - in (mm) 132.7 (3,371) x 40.5 (1,028) x 63.1 (1,604)

Steel: 3,435 (1,558) Weight - Ibs (kg) Aluminum: 3,056 (1,386)



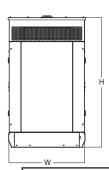


## **LEVEL 1 ACOUSTIC ENCLOSURE**

L x W x H - in (mm) 154.1 (3,915) x 40.5 (1,028) x 63.1 (1,604)

Steel: 3,671 (1,665) Weight - Ibs (kg) Aluminum: 3,157 (1,432)

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#### **LEVEL 2 ACOUSTIC ENCLOSURE**

L x W x H - in (mm) 144.5 (3,670) x 40.5 (1,028) x 80.0 (2,031)

Steel: 3,790 (1,719) Weight - Ibs (kg)

Aluminum: 3,208 (1,455)

- \* All measurements are approximate and for estimation purposes only.
- † Dimensions based on unit with the Standard Model Alternator

# YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

Specification characteristics may change without notice. Please consult a Generac Power Systems Industrial Dealer for detailed installation drawings.

6 OF 6