

G9.0L

SPARK-IGNITED GENERATOR

Standby Power Rating
100 kW, 60Hz
130 kW, 60Hz
150 kW, 60Hz

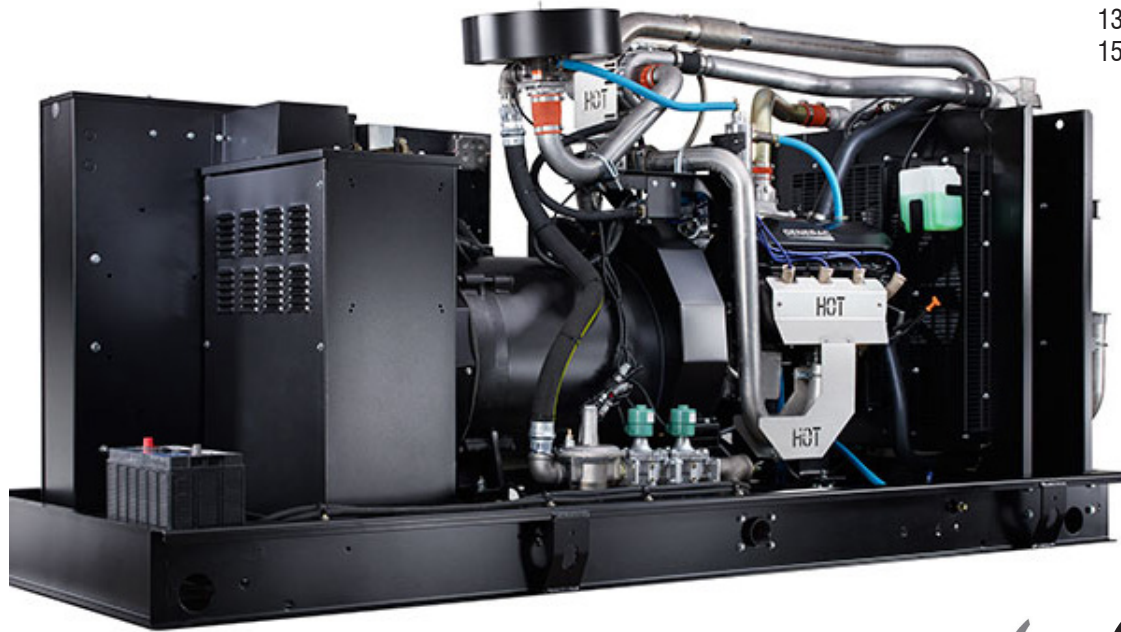


Image used for illustration purposes only
Codes or standards compliance listing may not be available with all configurations.
Consult factory for details.



*Assembled in the USA using domestic and foreign parts



UL2200, UL508, UL489



CSA C22.2, B149



DIN

BS5514 and DIN 6271



SAE J1349



NFPA 37, 70, 99, 110



NEC 700, 701, 702, 708



ISO 9001, 8528, 3046, 7637



NEMA ICS10, MG1, 250, ICS6, AB1



ANSI C62.41

- Control System - NFPA 110 Level 1 Compliant
- Cooling System can operate at up to 122 °F (50 °C) Ambient
- Fast Starting - NFPA 110 Type 10 starting capable
- Ruggedness - Can accept full rated load in a single step
- Alternator - Low Temperature Rise (< 120 °C) alternators with permanent magnet excitation
- Prototype Tested - Prototype Testing performed in accordance with requirements of NFPA 110 for Level 1 systems

SINGLE SOURCE SERVICE RESPONSE from Generac's extensive dealer network provides parts and service know-how for the entire unit, from the engine to the smallest electronic component.

Standard Features**ENGINE SYSTEM****General**

- 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 (Enclosed Only)
- South Coast Air Quality Management District CEP

Fuel System

- On board Flexible Fuel Line with NPT Connection (Shipped Loose)
- Primary and Secondary Internal Fuel Shutoff

Cooling System

- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Factory-Installed Radiator
- 50/50 Ethylene Glycol Antifreeze
- Radiator Drain Extension

Engine Electrical System

- Battery Charging Alternator
- Battery Cables
- Battery Tray
- Rubber-Booted Engine Electrical Connections

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)
- 120V GFCI and 240V Outlets

ALTERNATOR SYSTEM

- Class H Insulation Material
- 2/3 Pitch
- Skewed Stator
- Permanent Magnet Excitation
- Sealed Bearings
- Amortisseur Winding
- Full Load Capacity Alternator
- Permanent Magnet Excitation System

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

Optional Features**Available Voltages**

- 120/240V 1-Phase
- 120/208V 3-Phase
- 120/240V 3-Phase
- 277/480V 3-Phase

Available Fuel Types

- Natural Gas
- LP Vapor
- Dual - NG Primary/LP Vapor Secondary

Engine Options and Accessories

- Ultra-Low Engine Emissions (South Coast Air Quality Management District CEP)
- Air Filter Restriction Indicator
- Engine Block Heater, Factory Installed (1500W, 120W)
- Oil Temperature Indication and Alarms
- Oil Pan Heater
- Critical Exhaust Silencer (Open Set Only)*

Battery/Charger Options

- Battery - Group 31, Factory Installed
- 10 Amp Automatic Float/Equalize Battery Charger
- Battery Warmer, Factory Installed

Main Line Circuit Breaker (MLCB) Options

(Not all circuit breaker ratings available in options; contact factory for details)

- Standard MLCB (80%, Thermal-Magnetic)
- MLCB with 12VDC Shunt Trip and Auxiliary Contacts
- 100% Rated MLCB
- Electronic Trip (LSI) MLCB
- Optional Size MLCB
- Bus Bar Only (No MLCB)
- Dual MLCBs or MLCB and Bus Bar

Enclosure Options and Accessories

- Weather Protected Enclosure
- Level 1 Sound Attenuated Enclosure
- Level 2 Sound Attenuated Enclosure
- Level 2 Sound Attenuated Enclosure with Motorized Dampers
- All Enclosures Available in Steel and Aluminum
- Enclosure Heater (Only Available with Motorized Dampers)
- Damper Actuator Position Alarm (Available only with Level 2 Sound Attenuated Enclosure with Motorized Dampers)
- Door Open Alarm Switch
- Universal Voltage AC/DC Light Kit

Control System Options and Accessories

- Engine Run Relay
- Ground Fault Annuciation
- 21 Light Remote Annunciator*
- 21 Light Remote Annunciator with Eight Function Alarm Assembly Relay*
- Eight Function Alarm Relay Panel*
- Remote Emergency Stop - Break Glass*
- Remote Emergency Stop - Surface Mount*
- Remote Emergency Stop - Flush Mount*
- Eight Position Auxiliary Load Center
- Extended 2 Hour Rated Power Factor Testing

*Part Shipped Loose

Warranty Options

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

Note: Not all options available in all configurations. Contact factory for details.

Controller Features



Digital H Control Panel- Dual 4x20 Display

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
- Low Fuel Pressure Alarm
- 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)

Engine Fuel Consumption (Nominal)

Nom. kW		Natural Gas		Liquid Propane Vapor		
		ft ³ /hr	m ³ /hr	ft ³ /hr	m ³ /hr	
100	25% of Rated Load	494	13.9	25% of Rated Load	192	5.4
	50% of Rated Load	760	21.5	50% of Rated Load	290	8.2
	75% of Rated Load	1,011	28.6	75% of Rated Load	393	11.1
	100% of Rated Load	1,261	35.7	100% of Rated Load	486	13.7
130	25% of Rated Load	378	10.7	25% of Rated Load	157.4	4.5
	50% of Rated Load	669	19.0	50% of Rated Load	269.9	7.6
	75% of Rated Load	904	25.6	75% of Rated Load	364.4	10.3
	100% of Rated Load	1,116	31.6	100% of Rated Load	449.8	12.7
150	25% of Rated Load	436	12.4	25% of Rated Load	220	6.2
	50% of Rated Load	913	25.9	50% of Rated Load	268	10.4
	75% of Rated Load	1,320	37.4	75% of Rated Load	506	14.3
	100% of Rated Load	1,726	48.9	100% of Rated Load	639	18.1

Note: Fuel supply must be sized for full load
 Refer to "Emissions Data Sheets" for maximum fuel flow for EPA
 and SCAQMD permitting purposes

Generator Output Voltage/kW - 60Hz

Nom. kW	Voltage (3-Phase unless noted)	kW LPG	Amp LPG	kW Nat. Gas	Amp Nat. Gas	Standard CB Size
100	120/240 (single phase)	100	417	100	417	500
	120/208	100	347	100	347	400
	120/240	100	301	100	301	350
	277/480	100	150	100	150	175
	600V	100	120	100	120	150
130	120/240 (single phase)	130	542	130	542	600
	120/208	130	451	130	451	500
	120/240	130	391	130	391	450
	480/277	130	195	130	195	225
	600	130	156	130	156	175

Nom. kW	Voltage (3-Phase unless noted)	kW LPG	Amp LPG	kW Nat. Gas	Amp Nat. Gas	Standard CB Size
150	120/240 (single phase)	136	567	138	575	700
	120/208	140	486	150	521	600
	120/240	140	422	150	452	500
	480/277	140	211	150	226	250
	600	140	169	150	181	225

Engine Cooling

	100 kW	130 kW	150 kW
Air Flow (Inlet Air Combustion and Radiator) - cfm (m ³ /m)	5,797 (164.2)	5,757 (163.0)	5,797 (164.2)
System Coolant Capacity - gal (L)	6.0 (22.7)	6.0 (22.7)	6.0 (22.7)
Heat rejection to coolant - BTU/hr	390,000	302,400	390,000
Max Operating Air Temperature - °F (°C)	122 (50)	122 (50)	122 (50)
Maximum Temperature Before Derate - °F (°C)	77 (25)	77 (25)	77 (25)
Maximum Altitude Before Derate - ft (m)	600	600	600
Derate	3.0% per 1000 ft (305 m) for altitude and 2.0% per 5 °F (3 °C) for temperature		2.1% per 1000 ft (305 m) for altitude. For temperature, 2.5% derate per 5 °F (3 °C) over 77 °F (25 °C) for Natural Gas or 4% derate per 5 °F (3 °C) above 87 °F (31 °C) for Propane
Maximum Radiator Backpressure - in H ₂ O (mmHg)	0.5 (0.9)	0.5 (0.9)	0.5 (0.9)

Combustion Air Requirements

Flow at Rated Power - cfm (m ³ /m)	282 (7.9)	370.9 (10.5)	428 (12.1)
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Engine

Rated Engine Speed - rpm	1,800	1,800	1,800
Horsepower at Rated Power - hp	149	200	230.3
Piston Speed - ft/min	1,275	1,275	1,275
BMEP - psi	125	162	186.6

Exhaust

Exhaust Flow at Rated Output - cfm (m ³ /m)	866 (24.5)	1,341 (38.0)	1,548 (43.8)
Maximum Allowable Backpressure at Engine Exhaust Manifold - inHg (kPa)	2.2 (7.47)	2.2 (7.47)	2.2 (7.47)
Exhaust Temperature at Engine Exhaust Manifold - °F (°C)	1,200 (649)	1,112 (600)	1,166 (630)

Generator Specifications

Type	Synchronous
Rotor Insulation Class	H
Stator Insulation Class	H
Telephone Interference Factor (TIF)	<50
Alternator Out Leads 1-Phase	4-Wire
Alternator Output Leads 3-Phase	12-Wire
Bearings	Sealed Ball
Couplings	Flexible Disc
Excitation System	Permanent Magnet

Voltage Regulation

Type	Full Digital
Sensing	All Phases
Regulation	±0.5%

Governor Specifications

Type	Electronic, Isochronous
Steady State Regulation	±0.25%

Electrical System

Battery Charing Alternator	Standard
12 VDC, 10 A Automatic Float/Equalize Battery Charger	Standard
System Voltage	12 VDC

Engine Specifications

Make	Generac
Model	G9.0
Cylinders/Arrangement	V-8
Displacement (cu. in./Liters)	540/8.9
Bore (in/mm)	4.49/114.23
Stroke (in/mm)	4.25/107.15
Compression Ratio	9.9:1 - 100kW 10.5:1 - 130kW, 150kW
Intake Air System	Naturally Aspirated - 100kW Turbocharged/Aftercooled - 130kW, 150kW
Cylinder Head Type	Aluminum
Piston Type	Aluminum Alloy
EPA Emissions Certification	Stationary Emergency

Engine Lubrication System

Oil Pump Type	Gear
Oil Filter Type	Full-Flow Spring-On Cartridge
Crankcase Capacity (qt/L)	9.5/10.0- 100kW 8.0/8.5- 130kW, 150kW

Engine Cooling System

Type	Pressured Closed Recovery
Water Pump	Belt Driven
Fan Speed (rpm)	2,385 - 100kW 2,330 - 130kW, 150kW
Fan Diameter (in/mm)	20 (508)
Fan Mode	Pusher

Fuel System

Fuel Type	Natural Gas, Propane Vapor
Carburetor	Down Draft
Secondary Fuel Regulator	Standard
Fuel Shut Off Solenoid	Standard
Standard Fuel Pressure (in H ₂ O/mmHg)	11-14 (20.6-26.2)
Optional Fuel Pressure (in H ₂ O/mmHg)	7-11 (13.7-20.6)

Motor Starting Surge Capacity

Voltage Dip @ 0.3pf

Nom. kW	Voltage	sKVA at 35% Voltage Dip
100	480	275
	208/240	206
130	480	406
	208/240	305
150	480	464
	208/240	348

100 • 130 • 150 kW
Application & Engineering Data
Dimensions and Weights

	100 kW	130 kW	150 kW
Open Set			
L x W x H in (mm)	94.2 x 40 x 47.5 (2,394 x 1,016 x 1,206)	110 x 39.9 x 54.3 (2,795 x 1,013 x 1,378)	116.5 x 49.7 x 55.6 (2,960 x 1,262 x 1,413)
Weight- lbs (kg)	2,543 (1,153)	2,674 (1,213)	2,674 (1,213)
No Load Sound Data- dBA	81	79	84
Full Load Sound Data- dBA	84	81	84
Standard Enclosure			
L x W x H in (mm)	111.79 x 40.46 x 56.18 (2,839.5 x 1,027.8 x 1,427)	132.7 x 40.5 x 63.1 (3,371 x 1,029 x 1,604)	143 x 50.4 x 68.2 (3,633 x 1,280 x 1,731)
Steel Weight- lbs (kg)	3,072 (1,393)	3,434 (1,558)	3,844 (1,744)
Aluminum Weight- lbs (kg)	2,802 (1,271)	3,055 (1,386)	3,386 (1,536)
No Load Sound Data- dBA	77	75	80
Full Load Sound Data- dBA	80	79	82
Level 1 Acoustic Enclosure			
L x W x H in (mm)	129.42 x 40.46 x 56.18 (3,287.2 x 1,027.8 x 1,427)	154.1 x 40.5 x 63.1 (3,915 x 1,029 x 1,604)	168.5 x 50.4 x 68.2 (4,279 x 1,280 x 1,731)
Steel Weight- lbs (kg)	3,233 (1,466)	3,670 (1,665)	4,023 (1,825)
Aluminum Weight- lbs (kg)	2,873 (1,303)	3,157 (1,432)	3,509 (1,592)
No Load Sound Data- dBA	70	69	69
Full Load Sound Data- dBA	75	74	74
Level 2 Acoustic Enclosure			
L x W x H in (mm)	111.81 x 40.46 x 68.61 (2,840 x 1,027.8 x 1,742.8)	114.5 x 40.5 x 80.0 (3,671 x 1,029 x 2,031)	143 x 50.4 x 91.7 (3,633 x 1,280 x 2,330)
Steel Weight- lbs (kg)	3,360 (1,524)	3,789 (1,719)	4,323 (1,961)
Aluminum Weight- lbs (kg)	2,928 (1,328)	3,207 (1,455)	5,593 (1,630)
No Load Sound Data- dBA	66	67	71
Full Load Sound Data- dBA	71	70	72