

G6.8L

SPARK-IGNITED GENERATOR

Standby Power Rating
50 kW, 60Hz
60 kW, 60Hz
70 kW, 60Hz

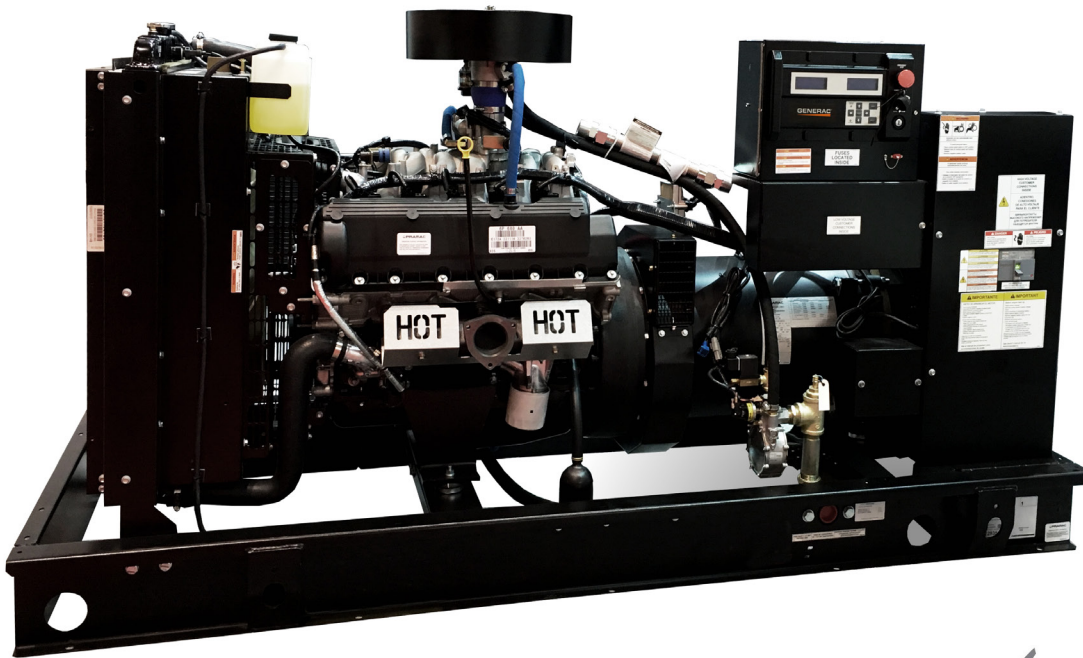


Image used for illustration purposes only
Codes or standards compliance listing may not be available with all configurations.
Consult factory for details.



*Assembled in the USA using domestic and foreign parts



UL2200, UL508, UL489



CSA C22.2, B149



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)

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)*

Alternator Accessories

- Alternator Anti-Condensation Heater

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 all 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 or 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 Annunciation
- 21 Light Remote Annunciator*

- 21 Light Remote Annunciator with Eight Function Alarm Assembly Relay*
- Eight Function Alarm Relay Panel*
- 16 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

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

*Item shipped loose

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

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)

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

Engine Fuel Consumption (Nominal)

Nom. kW		Natural Gas		Liquid Propane Vapor		
		ft ³ /hr	m ³ /hr	ft ³ /hr	m ³ /hr	
50	25% of Rated Load	282	7.9	25% of Rated Load	106.8	3.0
	50% of Rated Load	483	13.7	50% of Rated Load	183.0	5.2
	75% of Rated Load	652	18.5	75% of Rated Load	247.1	7.0
	100% of Rated Load	805	22.8	100% of Rated Load	305.0	8.6
60	25% of Rated Load	323	9.1	25% of Rated Load	122.2	3.5
	50% of Rated Load	554	15.7	50% of Rated Load	209.5	5.9
	75% of Rated Load	748	21.2	75% of Rated Load	282.8	8.0
	100% of Rated Load	923	26.1	100% of Rated Load	349.2	9.9
70	25% of Rated Load	353	10.0	25% of Rated Load	153.8	4.4
	50% of Rated Load	605	17.1	50% of Rated Load	263.7	7.5
	75% of Rated Load	817	23.1	75% of Rated Load	356.0	10.1
	100% of Rated Load	1,009	28.6	100% of Rated Load	439.5	12.4

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
50	120/240 (Single-phase)	50	208	50	208	250
	120/208	50	173	50	173	200
	120/240	50	150	50	150	175
	277/480	50	75	50	75	90
60	120/240 (Single-phase)	60	250	60	250	300
	120/208	60	208	60	208	250
	120/240	60	180	60	180	225
	277/480	60	90	60	90	100
70	120/240 (Single-phase)	64	267	67	279	350
	120/208	67	232	70	243	300
	120/240	67	201	70	210	250
	277/480	67	101	70	105	125

Engine Cooling

	50 kW	60 kW	70 kW
Air Flow (Inlet Air Combustion and Radiator) - cfm (m ³ /m)	5,760 (163.1)	5,785 (163.8)	5,813 (164.6)
System Coolant Capacity - gal (L)	6.3 (23.9)	6.3 (23.9)	6.3 (23.9)
Heat rejection to coolant - BTU/hr	212,800	252,000	275,800
Max Operating Air Temperature - °F (°C)	122 (50)	122 (50)	122 (50)
Maximum Temperature Before Derate - °F (°C)	110 (43)	104 (40)	104 (40)
Maximum Altitude Before Derate - ft (m)	3,500 (1,067)	3,500 (1,067)	600 (183)
Derate	3.0% per 1000 ft (30 m) for altitude and 2% per 5 °F (3 °C) for temperature		
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)	160 (4.5)	185 (5.2)	213 (6.0)
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Engine

Rated Engine Speed - rpm	1,800	1,800	1,800
Horsepower at Rated Power - hp	80	96	107
Piston Speed - ft/min (m/min)	1,251 (381)	1,251 (381)	1,251 (381)
BMEP - psi (kPa)	85 (586)	102 (703)	119 (820)

Exhaust

Exhaust Flow at Rated Output - cfm (m ³ /m)	455 (12.69)	520 (14.7)	679.5 (19.2)
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)	1000 (537)	1050 (565)	1250 (676)

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

Engine Specifications

Make	Generac
Model	G6.8
Cylinders/Arrangement	V-10
Displacement (cu. in/Liters)	415/6.8
Bore (in/mm)	3.55/90.2
Stroke (in/mm)	4.17/105.9
Compression Ratio	9:1
Intake Air System	Naturally Aspirated
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)	6/5.7

Engine Cooling System

Type	Pressured Closed Recovery
Water Pump	Belt Driven
Fan Speed (rpm)	2,300
Fan Diameter (in/mm)	22/558
Fan Mode	Pusher

Fuel System

Fuel Type	Natural Gas, Propane Vapor
Carburetor	Down Draft
Secondary Fuel Regulator	Standard
Fuel Shut Off Solenoid	Standard
LP Fuel Pressure (in H ₂ O) (mmHg)	11-14 (20.5-26.2)
NG Fuel Pressure (in H ₂ O) (mmHg)	7-14 (13.7-20.6)

Motor Starting Surge Capacity

Voltage Dip @ 0.3pf

Nom. kW	Voltage	sKVA at 35% Voltage Dip
50	480	120
	208/240	90
60	480	146
	208/240	110
70	480	205
	208/240	154

Dimensions and Weights

	50 kW	60 kW	70 kW
Open Set			
L x W x H in (mm)	92.9 x 40 x 75.4 (2,360 x 1,015.9 x 1,914.1)		
Weight - lbs (kg)	1,929 (875)	1,929 (875)	1,929 (875)
No Load Sound Data - dBA	83	83	83
Full Load Sound Data - dBA	84	85	85
Standard Enclosure			
L x W x H in (mm)	111.8 x 40.5 x 55.3 (2,839.7 x 1,027.8 x 1,405.7)		
Steel Weight - lbs (kg)	2,370 (1,075)	2,370 (1,075)	2,370 (1,075)
Aluminum Weight - lbs (kg)	2,074.5 (941)	2,074.5 (941)	2,074.5 (941)
No Load Sound Data - dBA	75	75	75
Full Load Sound Data - dBA	77	78	79
Level 1 Acoustic Enclosure			
L x W x H in (mm)	129.4 x 40.5 x 55.3 (3,287.2 x 1,027.8 x 1,405.7)		
Steel Weight - lbs (kg)	2,590 (1,175)	2,590 (1,175)	2,590 (1,175)
Aluminum Weight - lbs (kg)	2,147 (974)	2,147 (974)	2,147 (974)
No Load Sound Data - dBA	70	70	70
Full Load Sound Data - dBA	73	73	74
Level 2 Acoustic Enclosure			
L x W x H in (mm)	111.8 x 40.5 x 67.8 (2,839.7 x 1,027.8 x 1,721.5)		
Steel Weight - lbs (kg)	2,811 (1,275)	2,811 (1,275)	2,811 (1,275)
Aluminum Weight - lbs (kg)	2,220 (1,007)	2,220 (1,007)	2,220 (1,007)
No Load Sound Data - dBA	67	67	67
Full Load Sound Data - dBA	68	69	69
Level 2 Acoustic Enclosure with Motorized Dampers			
L x W x H in (mm)	111.8 x 40.5 x 67.8 (2,839.7 x 1,027.8 x 1,721.5)		
Steel Weight - lbs (kg)	2,950 (1,338)	2,950 (1,338)	2,950 (1,338)
Aluminum Weight - lbs (kg)	2,330 (1,057)	2,330 (1,057)	2,330 (1,057)
No Load Sound Data - dBA	67	67	67
Full Load Sound Data - dBA	68	69	69