

G14.2L

NATURAL GAS GENERATOR



Standby Power Rating
175 kW, 60Hz
200 kW, 60Hz
230 kW, 60Hz
250 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 (SCAQMD) 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

Engine Options and Accessories

- 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 8D, 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 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*
 - 12 Position Auxiliary Load Center
 - Extended 2 Hour Rated Power Factor Testing
- *Item 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.

175 • 200 • 230 • 250 kW

Application & Engineering Data

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)

Generator Output Voltage/kW - 60Hz

Nom. kW	Voltage (3-phase unless noted)	kW Nat. Gas	Amp Nat. Gas	Standard CB Size
175	120/240 (Single-phase)	175	729	900
	120/208	175	607	700
	120/240	175	526	600
	277/480	175	263	300
200	120/240 (Single-phase)	200	833	900
	120/208	200	694	800
	120/240	200	601	700
	277/480	200	301	350
230	120/208	230	798	900
	120/240	230	692	800
	277/480	230	346	400
250	120/208	250	867	1,000
	120/240	250	752	900
	277/480	250	376	450

Engine Fuel Consumption (Nominal)

Nom. kW		Natural Gas	
		ft ³ /hr	m ³ /hr
175	25% of Rated Load	819	23.2
	50% of Rated Load	1,404	39.8
	75% of Rated Load	1,895	53.7
	100% of Rated Load	2,340	66.3
200	25% of Rated Load	900	25.5
	50% of Rated Load	1,543	43.7
	75% of Rated Load	2,083	59
	100% of Rated Load	2,571	72.8
230	25% of Rated Load	917	27.5
	50% of Rated Load	1,665	47.1
	75% of Rated Load	2,247	63.6
	100% of Rated Load	2,775	78.6
250	25% of Rated Load	1,044	29.6
	50% of Rated Load	1,790	50.7
	75% of Rated Load	2,417	68.4
	100% of Rated Load	2,983	84.5

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

Engine Cooling

	175 kW	200 kW	230 kW	250 kW
Air Flow (Inlet Air Combustion and Radiator) - cfm (m ³ /m)	9,389 (265.9)	9,432 (267)	10,078 (285.4)	10,078 (285.4)
System Coolant Capacity - gal (L)	10.5 (39.7)	10.5 (39.7)	14.5 (54.9)	14.5 (54.9)
Heat Rejection to Coolant - BTU/hr	597,740	670,280	743,830	788,204
Max Operating Air Temperature - °F (°C)	122 (50)	122 (50)	122 (50)	122 (50)
Maximum Temperature Before Derate - °F (°C)	110 (43)	110 (43)	112 (45)	110 (43)
Maximum Altitude Before Derate - ft (m)	6,000 (1,829)	3,500 (1,067)	6,000 (1,829)	3,500 (1,067)
Derate	2.1% per 1,000 ft (305 m) for altitude and 5.0% per 5 °F (3 °C) for temperature			
Maximum Radiator Backpressure - in H ₂ O	0.5	0.5	0.5	0.5

Combustion Air Requirements

Flow at Rated Power - cfm (m ³ /m)	389 (11.0)	432 (12.2)	408 (11.6)	453 (12.8)
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Engine

Rated Engine Speed - rpm	1,800	1,800	1,800	1,800
Horsepower at Rated Power - hp	267	304	368	374
Piston Speed - ft/min (m/min)	1,949 (594)	1,949 (594)	1,949 (594)	1,949 (594)
BMEP - psi	136	155	187	190

Exhaust

Exhaust Flow at Rated Output - cfm (m ³ /m)	1,349 (38.2)	1,499 (42.4)	1,930 (54.6)	1,961 (55.5)
Maximum Allowable Backpressure at Engine Exhaust Manifold - inHg (kPa)	2.2 (7.47)	2.2 (7.47)	2.2 (7.47)	2.2 (7.47)
Exhaust Temperature at Engine Exhaust Manifold - °F (°C)	1,378 (748)	1,384 (751)	1,350 (732)	1,350 (732)

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	±0.25%

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	24 VDC

Engine Specifications

Make	Generac
Model	G14.2
Cylinders/Arrangement	6 In-Line
Displacement (cu. in/Liters)	865/14.17
Bore (in/mm)	5.31/135
Stroke (in/mm)	6.50/165
Compression Ratio	9.5:1
Intake Air System	Turbocharged/Aftercooled
Cylinder Head Type	Cast Iron GT250, OHV
Piston Type	Aluminum
EPA Emissions Certification	Stationary Emergency

Engine Lubrication System

Oil Pump Type	Gear
Oil Filter Type	Full-Flow Cartridge
Crankcase Capacity (qt/L)	36.2/34.3

Engine Cooling System

Type	Pressured Closed Recovery
Water Pump	Belt Driven
Fan Speed (rpm)	1,894
Fan Diameter (in/mm)	30/762
Fan Mode	Pusher

Fuel System

Fuel Type	Natural Gas
Carburetor	Down Draft
Secondary Fuel Regulator	Standard
Fuel Shut Off Solenoid	Standard
NG Fuel Pressure (in H ₂ O)	7-11

Motor Starting Surge Capacity

Voltage Dip @ 0.3pf

Nom. kW	Voltage	sKVA at 35% Voltage Dip
175/200	480	653
	208/240	490
230/250	480	922
	208/240	692

175 • 200 • 230 • 250 kW
Application & Engineering Data
Dimensions and Weights

	175 kW	200 kW	230 kW	250 kW
Open Set				
L x W x H in (mm)	127.9 x 53.3 x 67.3 (3,250 x 1,344.5 x 1,711.2)		138.7 x 57.6 x 68.0 (3,524 x 1,463.1 x 1,728.3)	
Weight - lbs (kg)	5,442 (2,469)	5,460 (2,477)	6,031 (2,736)	6,031 (2,736)
No Load Sound Data - dBA	79	85	82	82
Full Load Sound Data - dBA	83	85	84	86
Standard Enclosure				
L x W x H in (mm)	153.9 x 52.7 x 69.7 (3,909 x 1,339.3 x 1,769.6)		174.7 x 52.9 x 77.8 (4,437.4 x 1,345.7 x 1,976.1)	
Steel Weight - lbs (kg)	6,422 (2,913)	6,440 (2,921)	7,596 (3,445)	7,596 (3,445)
Aluminum Weight - lbs (kg)	5,956 (2,702)	5,974 (2,710)	6,801 (3,085)	6,801 (3,085)
No Load Sound Data - dBA	75	75	79	79
Full Load Sound Data - dBA	80	81	81	83
Level 1 Acoustic Enclosure				
L x W x H in (mm)	180.1 x 52.7 x 69.6 (4,574.7 x 1,339.3 x 1,769.6)		200.2 x 57.5 x 77.8 (5,084.7 x 1,460.4 x 1,976.1)	
Steel Weight - lbs (kg)	6,726 (3,051)	6,744 (3,509)	8,059 (3,655)	8,059 (3,655)
Aluminum Weight - lbs (kg)	6,087 (2,761)	6,104 (2,769)	7,000 (3,175)	7,000 (3,175)
No Load Sound Data - dBA	70	70	73	73
Full Load Sound Data - dBA	76	76	76	78
Level 2 Acoustic Enclosure				
L x W x H in (mm)	154.5 x 54 x 93.4 (3,922.9 x 1,370.6 x 2,372.3)		180.65 x 57.5 x 107.3 (4,588.4 x 1,460.4 x 2,725.4)	
Steel Weight - lbs (kg)	6,962 (3,158)	6,980 (3,166)	8,632 (3,915)	8,632 (3,915)
Aluminum Weight - lbs (kg)	6,188 (2,807)	6,206 (2,815)	7,247 (3,287)	7,247 (3,287)
No Load Sound Data - dBA	67	67	70	70
Full Load Sound Data - dBA	71	71	72	72
Level 2 Acoustic Enclosure with Motorized Dampers				
L x W x H in (mm)	154.4 x 54 x 100.5 (3,923 x 1,371 x 2,552)		180.6 x 57.5 x 114.5 (4,588.4 x 1,460.4 x 2,908.7)	
Steel Weight - lbs (kg)	7,311 (3,316)	7,328 (3,324)	8,927 (4,049)	8,927 (4,049)
Aluminum Weight - lbs (kg)	6,497 (2,947)	6,517 (2,956)	7,471 (3,389)	7,471 (3,389)
No Load Sound Data - dBA	67	67	70	70
Full Load Sound Data - dBA	71	71	72	72