SG150 | 14.2L | 150 kW

INDUSTRIAL SPARK-IGNITED GENERATOR SET

EPA Certified Stationary Emergency

GENERAC | INDUSTRIAL POWER

DEMAND RESPONSE READY

Standby Power Rating
150 kW, 188 kVA, 60 Hz

Demand Response Rating
150 kW, 188 kVA, 60 Hz

Prime Power Rating*
135 kW, 169 kVA, 60 Hz

ISO 9001:2008

USA ENGINEERED & BUILT* *Assembled in the USA using domestic and foreign parts

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

Image used for illustration purposes only

Codes and Standards

Generac products are designed to the following standards:

UL2200, UL508, UL142, UL489

CSA 22.2

BS5514 and DIN 6271

SAE J1349

NFPA 37, 70, 99, 110

NEC700, 701, 702, 708

ISO 3046, 7637, 8528, 9001

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 ensures 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 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.

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STANDARD EQUIPMENT

DEMAND RESPONSE READY

ENGINE SYSTEM

- Oil Drain Extension
- Heavy Duty 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
- Permanent Magnet 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 (Enclosed Units)
- Standard Factory Testing
- 2 Year Limited Warranty (Standby Rated Units)
- 1 Year Limited Warranty (Prime 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 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
- 0.2msec 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)

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INDUSTRIAL SPARK-IGNITED GENERATOR SET

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CONFIGURABLE OPTIONS

DEMAND RESPONSE READY

ENGINE SYSTEM

- ○ Engine Coolant Heater
- ○ Oil Heater
- ○ Air Filter Restriction Indicator
- ○ Stone Guard (Open Set Only)
- ○ Fan and Belt Guards

ELECTRICAL SYSTEM

- ○ 10A UL Battery Charger
- ○ Battery Warmer

ALTERNATOR SYSTEM

- ○ Alternator Upsizing
- ○ Anti-Condensation Heater
- ○ Tropical Coating

CIRCUIT BREAKER OPTIONS

- ○ Main Line Circuit Breaker
- ○ 2nd Main Line Circuit Breaker
- ○ Shunt Trip and Auxiliary Contact
- ○ Electronic Trip Breakers

GENERATOR SET

- ○ Demand Response Rating
- ○ GenLink® Communications Software (English Only)
- ○ Extended Factory Testing (3-Phase Only)
- ○ 12 Position Load Center
- ○ Vapor Recovery Heater

ENCLOSURE

- ○ Standard Enclosure
- ○ Level 1 Sound Attenuation
- ○ Level 2 Sound Attenuation
- ○ Level 2 Sound Attenuation with Motorized Dampers
- ○ Steel Enclosure
- ○ Aluminum Enclosure
- ○ Up to 200 MPH Wind Load Rating*
- ○ AC/DC Enclosure Lighting Kit
- ○ Enclosure Ambient Heaters
- ○ Door Alarm Switch

CONTROL SYSTEM

- ○ NFPA 110 Compliant 21-Light Remote Annunciator
- ○ Remote Relay Assembly (8 or 16)
- ○ Oil Temperature Sender with 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
- ○ 120V GFCI and 240V Outlet
- ○ 100 DB Alarm Horn

WARRANTY (standby gensets only)

- ○ 2 Year Extended Limited Warranty
- ○ 5 Year 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

ALTERNATOR SYSTEM

- ○ 3rd Breaker System

CONTROL SYSTEM

- ○ Spare Inputs (x4) / Outputs (x4)
- ○ Battery Disconnect Switch

GENERATOR SET

- ○ Special Testing
- ○ Battery Box

RATING DEFINITIONS

Standby - See Bulletin 0187500SSB

Demand Response- See Bulletin 10000018250

Prime - See Bulletin 0187510SSB

* Consult factory for availability

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GENERAC | INDUSTRIAL POWER

APPLICATION AND ENGINEERING DATA

DEMAND RESPONSE READY

ENGINE SPECIFICATIONS

General

Make	Generac
Cylinder #	6
Type	In-line
Displacement - L (Cu In)	14.17 (864.71)
Bore - mm (in)	135 (5.31)
Stroke - mm (in)	165 (6.50)
Compression Ratio	9.5:1
Intake Air Method	Turbocharged/Aftercooled
Number of Main Bearings	7
Connecting Rods	Carbon Steel
Cylinder Head	Cast Iron GT250, OHV
Cylinder Liners	Ductile Iron
Ignition	Altronic CD1
Piston Type	Aluminum
Crankshaft Type	Ductile Iron
Lifter Type	Solid
Intake Valve Material	Special Heat- Resistant Steel
Exhaust Valve Material	High Temp Alloy Steel
Hardened Valve Seats	High Temp Alloy Steel

Engine Governing

Governor	Electronic
Frequency Regulation (Steady State)	±0.25%

Lubrication System

Oil Pump Type	Gear
Oil Filter Type	Twin Full-flow with Intercooler
Crankcase Capacity - L (qts)	34.3 (36.2)

Cooling System

Cooling System Type	Pressurized Closed Recovery
Fan Type	Pusher
Fan Speed (rpm)	1,894
Fan Diameter - mm (in)	762 (30)

Fuel System

Fuel Type	Natural Gas
Carburetor	Down Draft
Secondary Fuel Regulator	Standard
Fuel Shut Off Solenoid	Standard (Dual)
Operating Fuel Pressure	7" - 11" H_2O

Engine Electrical System

System Voltage	24 VDC
Battery Charger Alternator	Standard
Battery Size	See Battery Index 0161970SBY
Battery Voltage	(2) - 12 VDC
Ground Polarity	Negative

ALTERNATOR SPECIFICATIONS

Standard Model	Generac 520 mm
Poles	4
Field Type	Revolving
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion	<5% (3-Phase)
Telephone Interference Factor (TIF)	<50
Standard Excitation	Permanent Magnet
Bearings	Single Sealed
Coupling	Direct, Flexible Disc
Prototype Short Circuit Test	Yes
Voltage Regulator Type	Full Digital
Number of Sensed Phases	All
Regulation Accuracy (Steady State)	±0.25%

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OPERATING DATA

DEMAND RESPONSE READY

POWER RATINGS

	Standby/Demand Response	
Single-Phase 120/240VAC @1.0pf	150 kW	Amps: 625
Three-Phase 120/208 VAC @0.8pf	150 kW	Amps: 521
Three-Phase 120/240 VAC @0.8pf	150 kW	Amps: 452
Three-Phase 277/480 VAC @0.8pf	150 kW	Amps: 226
Three-Phase 346/600 VAC @0.8pf	150 kW	Amps: 181

STARTING CAPABILITIES (sKVA)

sKVA vs. Voltage Dip

480 VAC							
Alternator	kW	10%	15%	20%	25%	30%	35%
Standard	150	133	199	265	332	398	464
Upsize 1	175	187	280	373	467	560	653
Upsize 2	200	187	280	373	467	560	653
Upsize 3	250	263	395	527	658	790	922
Upsize 4	300	303	454	605	757	908	1,059

208/240 VAC							
Alternator	kW	10%	15%	20%	25%	30%	35%
Standard	150	100	149	199	249	299	348
Upsize 1	175	140	210	280	350	420	490
Upsize 2	200	140	210	280	350	420	490
Upsize 3	250	197	296	395	494	593	692
Upsize 4	300	227	341	454	568	681	794

FUEL CONSUMPTION RATES*

Natural Gas – ft^3/hr (m^3/hr)

Percent Load	Standby
25%	745 (21.1)
50%	1,278 (36.2)
75%	1,725 (48.8)
100%	2,129 (60.3)

* Fuel supply installation must accommodate fuel consumption rates at 100% load.

COOLING

		Standby
Air Flow (inlet air combustion and radiator)	ft^3/min (m^3/min)	9,349 (264.7)
Coolant Flow per Minute	gal/min (l/min)	119 (450)
Coolant System Capacity	gal (l)	10 (37.9)
Heat Rejection to Coolant	BTU/hr	526,760
Inlet Air	cfm (m^3/min)	9,000 (255)
Maximum Operating Ambient Temperature	°F (°C)	104 (40)
Maximum Operating Ambient Temperature (Before Derate)	See Bulletin No. 0199270SSD	
Maximum Radiator Backpressure	in H_2O	0.5

COMBUSTION AIR REQUIREMENTS

	Standby
Flow at Rated Power cfm (m^3/min)	349 (9.9)

ENGINE

		Standby
Rated Engine Speed	rpm	1,800
Horsepower at Rated kW**	hp	238
Piston Speed	ft/min	1,949
BMEP	psi	121

EXHAUST

		Standby
Exhaust Flow (Rated Output)	cfm (m^3/min)	1,203 (34.1)
Maximum Allowable Backpressure	inHg (kPa)	0.75 (2.5)
Exhaust Temp (Rated Output - Post Silencer)	°F (°C)	1,373 (745)

** 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.
Please consult a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528 and DIN6271 standards.
Standby - See Bulletin 0187500SSB
Demand Response - See Bulletin 10000018250
Prime - See Bulletin 0187510SSB

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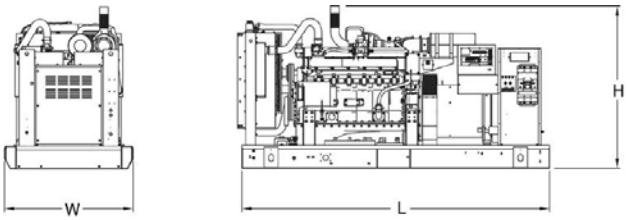
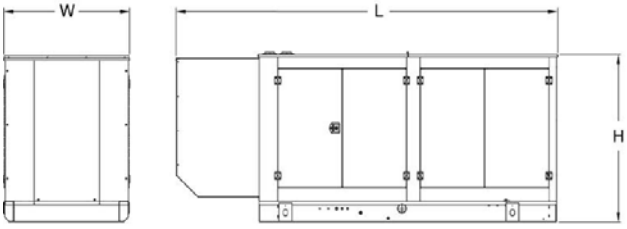
DIMENSIONS AND WEIGHTS*

DEMAND RESPONSE READY



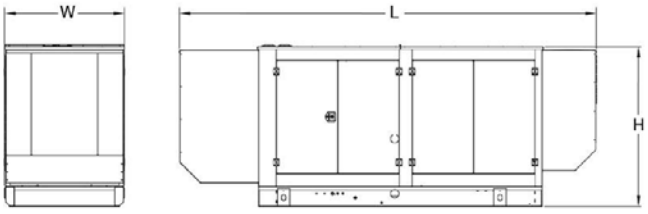
OPEN SET (Includes Exhaust Flex)

L x W x H in (mm)	127.95 (3,250) x 53.4 (1,357) x 62.3 (1,583)
Weight lbs (kg)	5,389 (2,445)



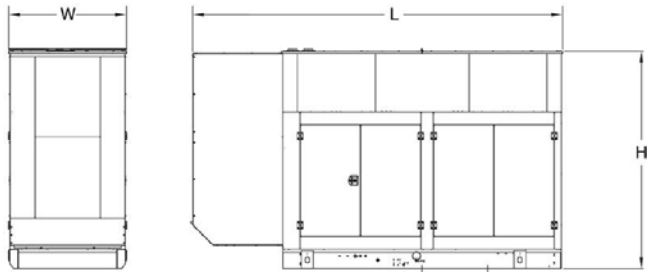
STANDARD ENCLOSURE

L x W x H in (mm)	154.4 (3,909) x 54 (1,371) x 69.8 (1,772)
Weight lbs (kg)	Steel: 6,369 (2,889) Aluminum: 5,903 (2,678)



LEVEL 1 ACOUSTIC ENCLOSURE

L x W x H in (mm)	179.9 (4,569) x 54 (1,371) x 69.8 (1,772)
Weight lbs (kg)	Steel: 6,674 (3,027) Aluminum: 6,034 (2,737)



LEVEL 2 ACOUSTIC ENCLOSURE

L x W x H in (mm)	154.45 (3,922.9) x 53.96 (1,370.6) x 93.3 (2,370)
Weight lbs (kg)	Steel: 6,909 (3,134) Aluminum: 6,135 (2,783)

* All measurements are approximate and for estimation purposes only.

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

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.

SPEC SHEET

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