

SG150 | 9.0L | 150 kW
INDUSTRIAL SPARK-IGNITED GENERATOR SET
EPA Certified Stationary Emergency

GENERAC® | **INDUSTRIAL
POWER**

Standby Power Rating
150 kW, 188 kVA, 60 Hz

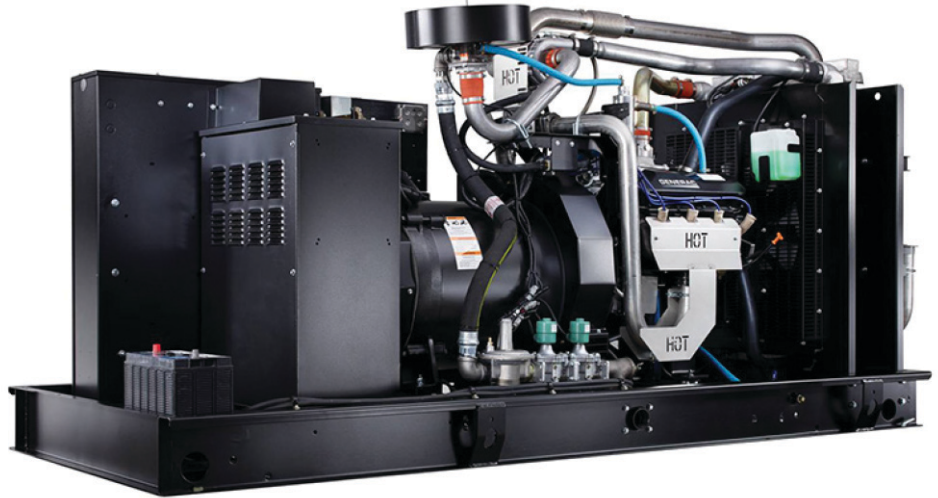


Image used for illustration purposes only

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, 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

For over 50 years, Generac has provided innovative design and superior manufacturing.

Generac ensures superior quality by designing and manufacturing most of its generator components, including alternators, enclosures and base tanks, control systems and communications software.

Generac gensets utilize a wide variety of options, configurations and arrangements, allowing us to meet the standby power needs of practically every application.

Generac searched globally to ensure the most reliable engines power our generators. We choose only engines that have already been proven in heavy-duty industrial applications under adverse conditions.

Generac is committed to ensuring our customers' service support continues after their generator purchase.

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STANDARD OPTIONS

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

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
- Brushless 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
- Standard Factory Testing
- 2 Year Limited Warranty (Standby Rated Units)
- 1 Year 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
- Rhino Coat™ - 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 & 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 & Warnings Time and Date Stamped
- Snap Shots of Key Operation Parameters During Alarms & Warnings
- Alarms and Warnings Spelled Out (No Alarm Codes)

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CONFIGURABLE OPTIONS

ENGINE SYSTEM

- Engine Block Heater
- Oil Heater
- Air Filter Restriction Indicator
- Stone Guard (Open Set Only)

ELECTRICAL SYSTEM

- 2.5A UL Battery Charger
- 10A UL Battery Charger
- Battery Warmer

ALTERNATOR SYSTEM

- Alternator Upsizing
- Anti-Condensation Heater
- Tropical Coating
- Permanent Magnet Excitation

CIRCUIT BREAKER OPTIONS

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

GENERATOR SET

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

ENCLOSURE

- Standard Enclosure
- Level 1 Sound Attenuation
- Level 2 Sound Attenuation
- Steel Enclosure
- Aluminum Enclosure
- AC/DC Enclosure Lighting Kit
- Door Alarm Switch

CONTROL SYSTEM

- NFPA 110 Compliant 21-Light Remote Annunciator
- Remote Relay Assembly (8 or 16)
- Oil Temperature Indicator 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

WARRANTY

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

ENCLOSURE

- Motorized Dampers
- Enclosure Ambient Heaters
- Up to 200 MPH Wind Load Rating*

RATING DEFINITIONS

Standby - See Bulletin 0187500SSB

Prime - See Bulletin 0187510SSB

*Consult factory for availability

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APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

General

Make	Generac
Cylinder #	6
Type	V
Displacement - L (Cu In)	8.9L (540)
Bore - mm (in)	114.23 (4.49)
Stroke - mm (in)	107.15 (4.25)
Compression Ratio	10.5:1
Intake Air Method	Turbocharged/Aftercooled
Number of Main Bearings	5
Connecting Rods	Forged
Cylinder Head	Cast Iron
Cylinder Liners	No
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

Governor	Electronic
Frequency Regulation (Steady State)	± 0.25%

Lubrication System

Oil Pump Type	Gear
Oil Filter Type	Full-Flow Spin-On Cartridge
Crankcase Capacity - L (qts)	8.5 (8.0)

Cooling System

Cooling System Type	Pressurized Closed
Water Pump Flow - gal/min (l/min)	26
Fan Type	Pusher
Fan Speed (rpm)	2330
Fan Diameter - mm (in)	558 (22)

Fuel System

Fuel Type	Natural Gas, Propane
Carburetor	Down Draft
Secondary Fuel Regulator	Standard
Fuel Shut Off Solenoid	Standard (Dual)
Operating Fuel Pressure (NG/LPV)	7"-11" H ₂ O
Operating Fuel Pressure (LPL)	30 - 312 psi

Engine Electrical System

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

ALTERNATOR SPECIFICATIONS

Standard Model	Generac 520
Poles	4
Field Type	Revolving
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion	<5%
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	3
Regulation Accuracy (Steady State)	± 0.25%

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OPERATING DATA

POWER RATINGS

	Natural Gas		Propane or Dual Fuel (NG+LP)	
Single-Phase 120/240VAC @1.0pf	144 kW	Amps: 600	134 kW	Amps: 559
Three-Phase 120/208 VAC @0.8pf	150 kW	Amps: 521	140 kW	Amps: 486
Three-Phase 120/240 VAC @0.8pf	150 kW	Amps: 452	140 kW	Amps: 421
Three-Phase 277/480 VAC @0.8pf	150 kW	Amps: 226	140 kW	Amps: 211
Three-Phase 346/600 VAC @0.8pf	150 kW	Amps: 181	140 kW	Amps: 169

STARTING CAPABILITIES (sKVA)

480 VAC								208/240 VAC							
Alternator	kW	10%	15%	20%	25%	30%	35%	Alternator	kW	10%	15%	20%	25%	30%	35%
Standard	150	133	199	265	332	398	464	Standard	150	100	146	199	249	299	348
Upsize 1	200	187	280	373	467	560	653	Upsize 1	200	140	210	280	350	420	490

FUEL CONSUMPTION RATES*

Natural Gas – ft³/hr (m³/hr)		Propane Vapor - ft³/hr (m³/hr)		Propane Liquid - gal/hr	
Percent Load	Standby	Percent Load	Standby	Percent Load	Standby
25%	436.2 (12.4)	25%	219.9 (6.2)	25%	6.13
50%	912.9 (25.9)	50%	368.1 (10.4)	50%	10.28
75%	1320.6 (37.4)	75%	506.1 (14.3)	75%	14.13
100%	1726.1 (48.9)	100%	639.3 (18.1)	100%	17.85

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

COOLING

	Standby
Air Flow (inlet air combustion and radiator)	ft³/min (m³/min) 5797 (164.2)
Coolant Flow per Minute	gal/min (l/min) 26 (98)
Coolant System Capacity	gal (l) 6.0 (22.7)
Heat Rejection to Coolant	BTU/hr 390,000
Maximum Radiator Backpressure	in H ₂ O 0.5

COMBUSTION AIR REQUIREMENTS

	Standby
Flow at Rated Power cfm (m³/min)	428 (12.1)

ENGINE

	Standby
Rated Engine Speed	rpm 1800
Horsepower at Rated kW**	hp 230.3
Piston Speed	ft/min 1275
BMEP	psi 186.6

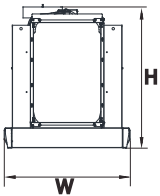
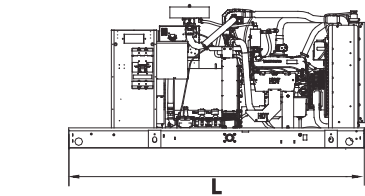
EXHAUST

	Standby
Exhaust Flow (Rated Output)	cfm (m³/min) 1548 (43.8)
Maximum Exhaust Backpressure	in Hg (Kpa) 0.75
Exhaust Temp (Rated Output - Post Silencer)	°F (°C) 1166 (630)
Exhaust Size Outlet	mm (in) 3.0" ID Flex (No Silencer)

** Refer to "Emissions Data Sheet" for maximum bHP for EPA and SCAQMD permitting purposes.

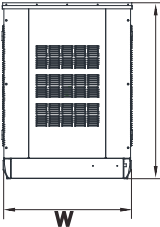
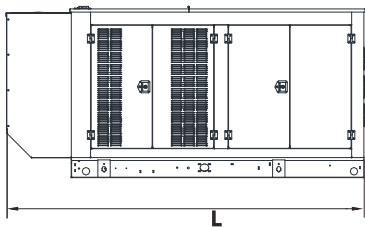
Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions. Please consult a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528 and DIN6271 standards.

DIMENSIONS AND WEIGHTS*



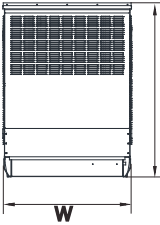
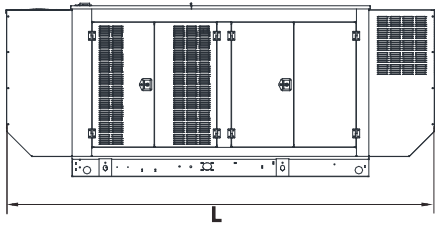
OPEN SET (Includes Exhaust Flex)

L x W x H in (mm)	116.5 (2960) x 49.7 (1262) x 55.6 (1413)
Weight lbs (kg)	2674 (1213)



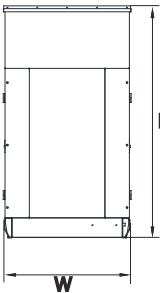
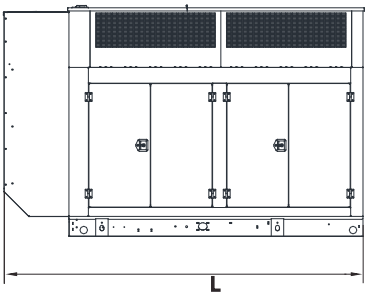
STANDARD ENCLOSURE

L x W x H in (mm)	143 (3632.9) x 50.4 (1280.1) x 68.2 (1731)
Weight lbs (kg)	Steel: 3844 (1744) Aluminum: 3386 (1536)



LEVEL 1 ACOUSTIC ENCLOSURE

L x W x H in (mm)	168.5 (4279.3) x 50.4 (1280.1) x 68.2 (1731)
Weight lbs (kg)	Steel: 4131 (1874) Aluminum: 3509 (1592)



LEVEL 2 ACOUSTIC ENCLOSURE

L x W x H in (mm)	143 (3632.9) x 50.4 (1280.1) x 91.77 (2329.8)
Weight lbs (kg)	Steel: 4323 (1961) Aluminum: 3593 (1630)

* 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.