21.9L | 350 kW SG350 INDUSTRIAL SPARK-IGNITED GENERATOR SET

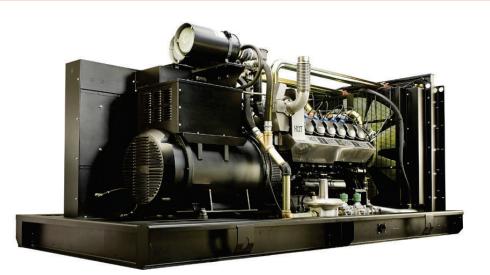
EPA Certified Stationary Emergency



STANDBY POWER RATING

350 kW, 438 kVA, 60 Hz

PRIME POWER RATING* 315 kW, 394 kVA, 60 Hz



*Built in the USA using domestic and foreign parts

*EPA Certified Prime ratings are not available in the U.S. or its Territories.

Image used for illustration purposes only

CODES AND STANDARDS

Generac products are designed to the following standards:



UL2200, UL508, UL142, UL498



NFPA70, 99, 110, 37



NEC700, 701, 702, 708



ISO9001, 8528, 3046, 7637, Pluses #2b, 4

Charlen In

NEMA ICS10, MG1, 250, ICS6, AB1



ANSI C62.41

os Dpd 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 led the industry with 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's 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 application under adverse conditions.

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

1 OF 6

INDUSTRIAL SPARK-IGNITED GENERATOR SET

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ENGINE SYSTEM

General

- 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

- Flexible 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

Engine Electrical System

- · Battery charging alternator
- Battery cables
- Battery tray
- Rubber-booted engine electrical connections
- Solenoid activated starter motor

ALTERNATOR SYSTEM

- UL2200 Genprotect ™
- Class H insulation material
- 2/3 Pitch
- Skewed Stator
- Permanent Magnet Excitation
- Sealed Bearings
- Amortisseur winding
- · Full load capacity alternator

GENERATOR SET

GENERAC

- Internal Genset Vibration Isolation
- Separation of circuits high/low voltage

INDUSTRIAL

POWER

- 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 (L1 & L2)
- Gasketed doors
- Stamped air-intake louvers
- Air discharge hoods for radiator-upward pointing
- Stainless steel lift off door hinges
- Stainless steel lockable handles
- Rhino Coat[™] Textured polyester powder coat

CONTROL SYSTEM



Control Panel

- Digital H Control Panel Dual 4x20 Display
- Programmable Crank Limiter
- 7-Day Programmable Exerciser
- Special Applications Programmable PLC
- RS-232/485
- · All-Phase Sensing DVR
- Full System Status
- Utility Monitoring
- Low Fuel Pressure Indication
- 2-Wire Start Compatible
- 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
- 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
- 15 channel data logging

High Temp Shutdown)

Low Fuel Pressure Alarm

Battery Voltage Warning

during alarms & warnings

speed Shutdown)

state conditions

codes)

Shutdown)

- 0.2 msec high speed data logging
 Alarm information automatically comes up
- Alarm information automatically comes up on the display

Alarms

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 Oil Pressure (Pre-programmable Low Pressure Shutdown)
 Coolant Temperature (Pre-programmed

Coolant Level (Pre-programmed Low Level

Alarms & warnings time and date stamped

Alarms & warnings for transient and steady

Alarms and warnings spelled out (no alarm

SPEC SHEET

2 OF 6

Snap shots of key operation parameters

Engine Speed (Pre-programmed Over

INDUSTRIAL SPARK-IGNITED GENERATOR SET

EPA Certified Stationary Emergency



CONFIGURABLE OPTIONS

ENGINE SYSTEM

General

- O Engine Block Heater with ball valves
- O Flexible Fuel Line NPT Connection
- O Oil Heater
- O Air Filter Restriction indicator
- O Stone Guad (Open Set Only)

Engine Electrical System

- O 10A UL battery charger
- O Battery Warmer

ALTERNATOR SYSTEM

- O Alternator Upsizing
- O Anti-Condensation Heater
- O Tropical coating (480/600 V non-upsized only)

CIRCUIT BREAKER OPTIONS

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

ENGINEERED OPTIONS

ENGINE SYSTEM

O Coolant heater ball valves O Fluid containment pans

ALTERNATOR SYSTEM

O 3rd Breaker Systems

CONTROL SYSTEM

O Spare inputs (x4) / outputs (x4) - H Panel OnlyO Battery Disconnect Switch

GENERATOR SET

- O Gen-Link Communications Software (English Only)
- O Extended Factory Testing (3 Phase Only)
- O 8 Position Load Center
- O 2 Year Extended Warranty
- O 5 Year Warranty
- O 5 Year Extended Warranty

ENCLOSURE

- O Standard Enclosure
- O Level 1 Sound Attenuation
- O Level 2 Sound Attenuation
- O Steel Enclosure
- O Aluminum Enclosure
- O 150 MPH Wind Kit
- O 12 VDC Enclosure Lighting Kit
- O 120 VAC Enclosure Lighting Kit O AC/DC Enclosure Lighting Kit
- O A0/DO Enclosure Eighting N

CONTROL SYSTEM

- O NFPA 110 Compliant
- O Remote Relay Board (8 or 16)
- O Oil Temperature Sender with Indication Alarm
- O Remote E-Stop (Break Glass-Type, Surface Mount)
- O Remote E-Stop (Red Mushroom-Type, Surface Mount)
- O Remote E-Stop (Red Mushroom-Type, Flush Mount)
- O Remote Communication Bridge
- O Remote Communication Ethernet
- O 10A Run Relay, 12 outputs
- O Ground Fault Indication and Protection Functions

GENERATOR SET

O Special Testing O Battery Box

ENCLOSURE

O Motorized DampersO Intrusion Ambient HeatersO Door Alarm Switch

RATING DEFINITIONS

Standby - Applicable for a varying emergency load for the duration of a utility power outage with no overload capability.

Prime - Applicable for supplying power to a varying load in lieu of utility for an unlimited amount of running time. A 10% overload capacity is available for 1 out of every 12 hours. The Prime Power option is only available on International applications. Power ratings in accordance with ISO 8528-1, Second Edition

SG350 | 21.9L | 350 kW INDUSTRIAL SPARK-IGNITED GENERATOR SET

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APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

General		Cooling System	
Make	Generac	Cooling System Type	Pressurized Closed Recove
Cylinder #	12	Water Pump Flow -gal/min (l/min)	211 (800)
Туре	V12	Fan Type	Pusher
Displacement - L (cu In)	21.9L (1336.42)	Fan Speed (rpm)	1404
Bore - mm (in)	128 (5.03)	Fan Diameter mm (in)	44
Stroke - mm (in)	142 (5.6)	Coolant Heater Wattage	2500
Compression Ratio	10:1	Coolant Heater Standard Voltage	240 V
Intake Air Method	Tubocharged/Aftercooled		
Number of Main Bearings	7		
Connecting Rods	Alloy Steel	Fuel System	
Cylinder Head	Cast Iron - OHV	Fuel Type	Natural Gas
Cylinder Liners	Cast Alloy Steel	Carburetor	Down Draft
Ignition	Altronic CD200D	Secondary Fuel Regulator	Standard
Piston Type	Aluminum Alloy	Fuel Shut Off Solenoid	Standard (Dual)
Crankshaft Type	Forged Alloy Steel	Operating Fuel Pressure	11" - 15" H ₂ O
Lifter Type	Solid		
Intake Valve Material	High Temp Alloy Steel		
Exhaust Valve Material	High Temp Alloy Steel		
Hardened Valve Seats	High Temp Alloy Steel	Engine Electrical System	
Engine Governing		System Voltage	24 VDC
0	Flastrania	Battery Charging Alternator	Standard
Governor Frequency Regulation (Steady State)	Electronic ±0.25%	Battery Size	See Battery Index 0161970SBY
		Battery Voltage	(2)12 VDC
Lubrication System		Ground Polarity	Negative
Oil Pump Type	Gear		
Oil Filter Type	Twin Full flow with intercooler		
Crankcase Capacity - L (qts)	30 (31.7)		
	· ,		

ALTERNATOR SPECIFICATIONS

Standard Model	520mm
Poles	4
Field Type	Revolving
Insulation Class - Rotor	Н
Insulation Class - Stator	Н
Total Harmonic Distortion	<5%
Telephone Interference Factor (TIF)	<50

Standard Excitation	Permanent Magnet
Bearings	Sealed Ball
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%

SPEC SHEET



Cooling System

Cooling System Type	Pressurized Closed Recovery
Water Pump Flow -gal/min (l/min)	211 (800)
Fan Type	Pusher
Fan Speed (rpm)	1404
Fan Diameter mm (in)	44
Coolant Heater Wattage	2500
Coolant Heater Standard Voltage	240 V

Fuel Type	Natural Gas
Carburetor	Down Draft
Secondary Fuel Regulator	Standard
Fuel Shut Off Solenoid	Standard (Dual)
Operating Fuel Pressure	11" - 15" H ₂ 0

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



OPERATING DATA

POWER RATINGS

		Natural Gas	
Three-Phase 120/208 VAC @0.8pf	350 kW	Amps: 1216	
Three-Phase 120/240 VAC @0.8pf	350 kW	Amps: 1053	
Three-Phase 277/480 VAC @0.8pf	350 kW	Amps: 527	
Three-Phase 347/600 VAC @0.8pf	350 kW	Amps: 421	

STARTING CAPABILITIES (sKVA)

							2VA A2. A	ullaye Dip					
				480	VAC					208/24	40 VAC		
Alternator	kW	10%	15%	20%	25%	30%	35%	10%	15%	20%	25%	30%	35%
Standard	350	387	581	775	968	1162	1356	345	570	835	1100	1450	1710
Upsize 1	555	457	686	914	1143	1371	1600	-	-	-	-	-	-
Upsize 2	642	471	707	943	1179	1414	1650	543	814	1086	1357	1629	1900

«KVA ve Voltage Din

FUEL CONSUMPTION RATES*

Natural Gas - ft ³ /hr (m ³ /hr)					
Percent Load Standby					
25% 1732 (49)					
50% 2598 (73.6)					
75% 3463 (98.1)					
100% 4328 (122.6)					
* Fuel supply installation must accommodate fuel consumption rates at 100% load.					

COOLING

		Standby	
Air Flow (inlet air combustion and radiator)	ft³/min (m³/min)	25,100 (711)	
Coolant Flow per Minute	gal/min (l/min)	211 (800)	
Coolant System Capacity	gal (I)	23 (87)	
Heat Rejection to Coolant	BTU/hr	1,102,122	
Max. Operating Ambient Temperature (before derate)	°F (°C)	104 (40)	
Maximum Radiator Backpressure	in H ₂ 0	0.5	

COMBUSTION AIR REQUIREMENT

ENGINE	EXHAUST	
	Flow at Rated Power cfm (m ³ /min) 750 (21)	
	Standby	_

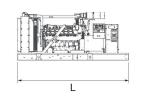
		Standby			Standby
Rated Engine Speed	rpm	1800	Exhaust Flow (Rated Output)	cfm (m ³ /min)	2720 (77)
Horsepower at Rated kW**	hp	620	Max. Backpressure (Post Silencer)	inHg (Kpa)	0.75
Piston Speed	ft/min	1680	Exhaust Temp (Rated Output - post silencer)	°F (°C)	1350 (732)
BMEP	psi	123	Exhaust Outlet Size (Open Set)	mm (in)	3.5" O.D .Flex

 ** 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. EPA Certified Stationary Emergency



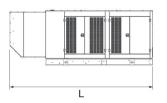
DIMENSIONS AND WEIGHTS*

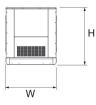




OPEN SET (Includes Exhaust Flex)

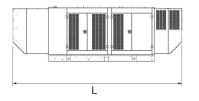
L x W x H in (mm)	154.4 (3923) x 71 (1803) x 67.6 (1716)
Weight Ibs (kg)	8274 (3753)

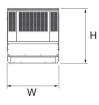




STANDARD ENCLOSURE

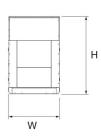
L x W x H in (mm)	207.4 (5268) x 70 (1800) x 80 (2032)
Weight Ibs (kg)	Steel: 10463 (4746) Aluminum: 9376 (4253)





LEVEL 1 ACOUSTIC ENCLOSURE

L x W x H in (mm)	247.5 (6285) x 70 (1800) x 80 (2032)
Weight lbs (kg)	Steel: 11470 (5203) Aluminum: 9808 (4449)



LEVEL 2 ACOUSTIC ENCLOSURE

L x W x H in (mm)	207.4 (5268) x 70 (1800) x 144 (2899)
Weight Ibs (kg)	Steel: 11808 (5356) Aluminum: 9954 (4515)

*All measurements are approximate and for estimation purposes only.

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

SPEC SHEET

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Specification characteristics may change without notice. Please consult a Generac Power Systems Industrial Dealer for detailed installation drawings.