

DEMAND RESPONSE READY

Standby Power Rating
 100 kW, 125 kVA, 60 Hz

Prime Power Rating
 90 kW, 113 kVA, 60 Hz

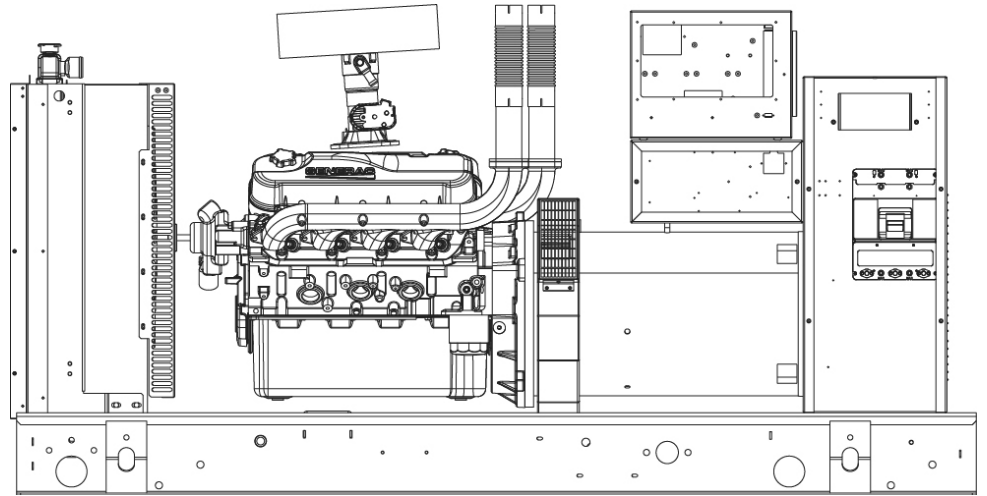


Image used for illustration purposes only



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

Codes and Standards

Generac products are designed to the following standards:

-   UL2200, UL508, 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.

STANDARD FEATURES

DEMAND RESPONSE READY

ENGINE SYSTEM

- 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

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
- 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
- 0.2 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)

CONFIGURABLE OPTIONS

DEMAND RESPONSE READY

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
- Level 2 Sound Attenuation with Motorized Dampers
- 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
- Damper Kit Auxiliary Contacts

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

ENCLOSURE

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

*Consult factory for availability

SG100 | 9.0L | 100 kW

INDUSTRIAL SPARK-IGNITED GENERATOR SET

EPA Certified Stationary Emergency

APPLICATION AND ENGINEERING DATA

DEMAND RESPONSE READY

ENGINE SPECIFICATIONS

General

Make	Generac	
Cylinder #	8	
Type	V	
Displacement - Cu In (L)	540 (8.9)	
Bore - in (mm)	4.49 (114.23)	
Stroke - in (mm)	4.25 (107.15)	
Compression Ratio	10.5:1 - G18	9.9:1 - G26
Intake Air Method	Naturally Aspirated	
Number of Main Bearings	5	
Connecting Rods	Forged Steel	
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 - qts (L)	8.0 (8.5) - G18	10.5 (9.9) w/ Filter - G26

Cooling System

Cooling System Type	Pressurized Closed Recovery	
Fan Type	Pusher	
Fan Speed (rpm)	2,330 - G18	2,385 - G26
Fan Diameter - in (mm)	22 (558)	

Fuel System

Fuel Type	Natural Gas, Propane Vapor	
Carburetor	Down Draft	
Secondary Fuel Regulator	Standard	
Fuel Shut Off Solenoid	Standard	
Operating Fuel Pressure in H ₂ O	11 - 14	
Optional Operating Fuel Pressure in H ₂ O	7 - 11	

Engine Electrical System

System Voltage	12 VDC	
Battery Charger Alternator	Standard	
Battery Size	See Battery Index 10000016949	
Battery Voltage	12 VDC	
Ground Polarity	Negative	

NOTE: G18 is all engines manufactured before October 12, 2017. G26 is all engines manufactured after October 12, 2017.

ALTERNATOR SPECIFICATIONS

Standard Model	Generac 390 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	Synchronous Brushless	
Bearings	Sealed Ball	
Coupling	Direct Drive	
Prototype Short Circuit Test	Yes	
Voltage Regulator Type	Full Digital	
Number of Sensed Phases	All	
Regulation Accuracy (Steady State)	±0.5%	

EPA Certified Stationary Emergency

OPERATING DATA

DEMAND RESPONSE READY

POWER RATINGS - NATURAL GAS/PROPANE VAPOR

	Standby/Demand Response	
Single-Phase 120/240 VAC @1.0pf	100 kW	Amps: 417
Three-Phase 120/208 VAC @0.8pf	100 kW	Amps: 347
Three-Phase 120/240 VAC @0.8pf	100 kW	Amps: 301
Three-Phase 277/480 VAC @0.8pf	100 kW	Amps: 150
Three-Phase 346/600 VAC @0.8pf	100 kW	Amps: 120

STARTING CAPABILITIES (sKVA)

sKVA vs. Voltage Dip

277/480 VAC								208/240 VAC							
Alternator	kW	10%	15%	20%	25%	30%	35%	Alternator	kW	10%	15%	20%	25%	30%	35%
Standard	100	79	118	157	197	236	275	Standard	100	59	89	118	148	177	206
Upsize 1	130	116	174	232	290	348	406	Upsize 1	130	87	131	174	218	261	305

FUEL CONSUMPTION RATES*

Natural Gas – ft ³ /hr (m ³ /hr)				Propane Vapor – ft ³ /hr (m ³ /hr)			
Percent Load		Standby		Percent Load		Standby	
25%		494.0 (14.1)		25%		192.1 (5.4)	
50%		759.6 (21.5)		50%		290.3 (8.2)	
75%		1,011.1 (28.6)		75%		392.6 (11.1)	
100%		1,261.4 (35.7)		100%		485.7 (13.8)	

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

COOLING

	Standby
Coolant System Capacity	gal (L) 6.0 (22.7)
Coolant Flow	gal/min (L/min) 27.5 (104)
Heat Rejection to Coolant	BTU/hr (kW) 390,000 (114.3)
Inlet Air	cfm (m ³ /hr) 5,797 (164.2)
Maximum Operating Ambient Temperature	°F (°C) 122 (50)
Maximum Operating Ambient Temperature (Before Derate)	See Bulletin No. 0199270SSD
Maximum Radiator Backpressure	in H ₂ O (kPa) 0.5 (0.12)

COMBUSTION AIR REQUIREMENTS

	Standby
Flow at Rated Power cfm (m ³ /min)	282 (7.9)

ENGINE

EXHAUST

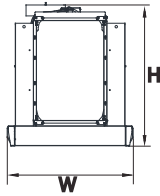
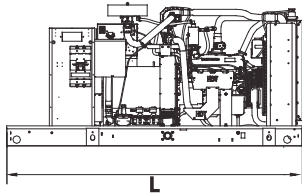
ENGINE			EXHAUST		
		Standby			Standby
Rated Engine Speed	rpm	1,800	Exhaust Flow (Rated Output)	cfm (m ³ /min)	866 (24.5)
Horsepower at Rated kW**	hp	149	Maximum Exhaust Backpressure	inHg (kPa)	1.5 (5.1)
Piston Speed	ft/min (m/min)	1,273 (388.2)	Exhaust Temp (Rated Output - Post Catalyst)	°F (°C)	1,200 (649)
BMEP	psi	125			

** 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.

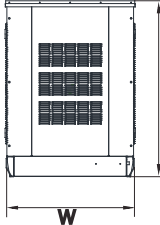
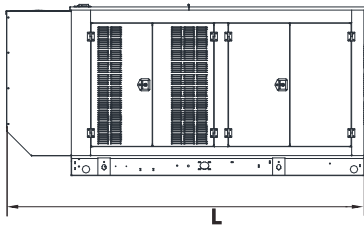
DIMENSIONS AND WEIGHTS*

DEMAND RESPONSE READY



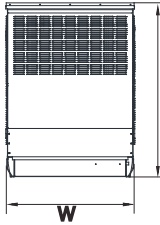
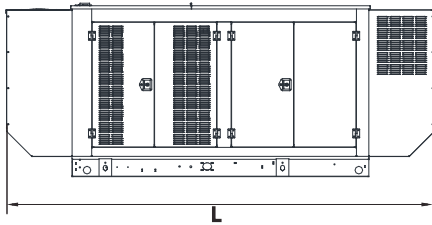
OPEN SET (Includes Exhaust Flex)

L x W x H in (mm)	94.2 (2,394) x 40.0 (1,016) x 47.5 (1,206)
Weight lbs (kg)	2,064 (936.2)



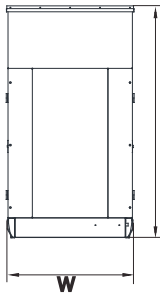
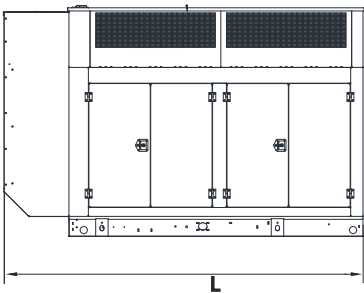
STANDARD ENCLOSURE

L x W x H in (mm)	111.8 (2,840) x 40.5 (1,027.8) x 56.2 (1,427)
Weight lbs (kg)	Steel: 2,708 (1,228) Aluminum: 2,413 (1,094)



LEVEL 1 ACOUSTIC ENCLOSURE

L x W x H in (mm)	129.4 (3,287) x 40.5 (1,028) x 56.2 (1,427)
Weight lbs (kg)	Steel: 2,798 (1,269.2) Aluminum: 2,355 (1,068)



LEVEL 2 ACOUSTIC ENCLOSURE

L x W x H in (mm)	111.8 (2,840) x 40.5 (1,028) x 68.6 (1,743)
Weight lbs (kg)	Steel: 3,022 (1,370.8) Aluminum: 2,431 (1,103)

* All measurements are approximate and for estimation purposes only.

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

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