SG625 | 33.9L | 625 kW

INDUSTRIAL SPARK-IGNITED GENERATOR SET

EPA Certified Stationary Emergency

GENERAC | INDUSTRIAL POWER

DEMAND RESPONSE READY

Standby Power Rating
625 kW, 781 kVA, 60 Hz

Demand Response Power Rating
625 kW, 781 kVA, 60 Hz

Prime Power Rating*
563 kW, 703 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

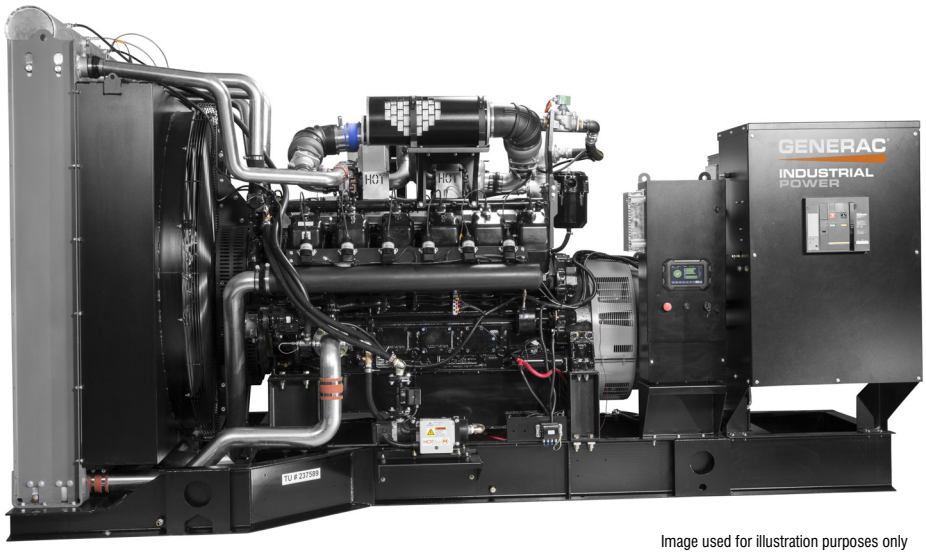


Image used for illustration purposes only

Codes and Standards

Generac products are designed to the following standards:

- 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

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.

SG625 | 33.9L | 625 kW

INDUSTRIAL SPARK-IGNITED GENERATOR SET

EPA Certified Stationary Emergency

GENERAC | INDUSTRIAL POWER

STANDARD FEATURES

DEMAND RESPONSE READY

ENGINE SYSTEM

- Oil Drain Extension
- Heavy Duty Air Cleaner
- Fan Guard
- Stainless Steel Flexible Exhaust Connection
- Factory Filled Oil and Coolant
- Critical Exhaust Silencer/Catalyst

Fuel System

- Fuel Line - NPT Connection
- Primary and Secondary Fuel Shutoff

Cooling System

- Closed Coolant Recovery System
- Metal Tubes
- Factory-Installed Radiator
- Radiator Drain Extension
- 50/50 Ethylene Glycol Antifreeze

Electrical System

- Battery Charging Alternator
- Battery Cables
- Battery Tray
- Rubber-Booted Engine Electrical Connections
- Solenoid Activated Starter Motor

ALTERNATOR SYSTEM

- GENprotect™
- Fault Protection
- Class H Insulation Material
- 2/3 Pitch
- Skewed Stator
- Permanent Magnet Excitation
- Sealed Bearings
- Amortisseur Winding
- Low Temp Rise (>248°F (120°C))

GENERATOR SET

- Internal Genset Vibration Isolation
- Separation of Circuits - High/Low Voltage
- Separation of Circuits - Multiple Breakers
- Wrapped Exhaust Piping (Enclosed Only)
- 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)
- Steel Lift Off Door Hinges
- Steel Lockable Handles
- RhinoCoat™ - Textured Polyester Powder Coat Paint

CONTROL SYSTEM

Power Zone® Controller

Program Functions

- NFPA 110 Level 1 Compliant
- Engine Protective Functions
- Alternator Protective Functions
- Digital Engine Governor Control
- Digital Voltage Regulator
- Multiple Programmable Inputs and Outputs
- Remote Display Capability
- Remote Communication Via Modbus® RTU, Modbus TCP/IP, Ethernet 10/100
- Alarm and Event Logging with Real Time Stamping
- Expandable Analog and Digital Inputs and Outputs
- Remote Wireless Software Update Capable
- Wi-Fi, Bluetooth, BMS and Remote Telemetry
- Built-In Programmable Logic Eliminates The Need For External Controllers Under Most Conditions
- Ethernet Based Communications Between Generators
- Programmable I/O Channel Properties
- Built-In Diagnostics

Protections

- Low Oil Pressure
- Low Coolant Level
- High/Low Coolant Temperature
- Sensor Failure
- Oil Temperature
- Over/Under Speed
- Over/Under Voltage
- Over/Under Frequency
- Over/Under Current
- Over Load
- High/Low Battery Voltage
- Battery Charger Current
- Phase To Phase and Phase To Neutral Short Circuits (I^2T Algorithm)

7 in Color Touch Screen Display

- Capacitive Color Touch Screen
- Sunlight Readable (1400 NITS)
- Easily Identifiable Icons
- Multi-Lingual
- On Screen Editable Parameters
- Key Function Monitoring
- Three Phase Voltage, Amperage, kW, kVA, and kVAr
- Selectable Line to Line or Line to Neutral Measurements
- Frequency
- Engine Speed
- Engine Coolant Temperature
- Engine Oil Pressure
- Engine Oil Temperature
- Battery Voltage
- Hour meter
- Warning and Alarm Indication
- Diagnostics
- Maintenance Events/Information

SG625 | 33.9L | 625 kW

INDUSTRIAL SPARK-IGNITED GENERATOR SET

EPA Certified Stationary Emergency

GENERAC® | INDUSTRIAL POWER

CONFIGURABLE OPTIONS

DEMAND RESPONSE READY

ENGINE SYSTEM

- ○ Engine Coolant Heater
- ○ Oil Heater
- ○ Two Stage Air Cleaner
- ○ Air Filter Restriction Indicator
- ○ Stone Guard (Open Set Only)
- ○ Critical Exhaust Silencer (Open Set Only)

ELECTRICAL SYSTEM

- ○ 20A UL Battery Charger
- ○ Battery Warmer

ALTERNATOR SYSTEM

- ○ Alternator Upsizing
- ○ Anti-Condensation Heater
- ○ Permanent Magnet Excitation

CIRCUIT BREAKER OPTIONS

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

GENERATOR SET

- ○ GenLink® Communications Software (English Only)
- ○ Extended Factory Testing (3-Phase Only)
- ○ 12 Position Load Center

ENCLOSURE

- ○ Weather Protected Enclosure
- ○ Level 1 Sound Attenuation
- ○ Level 2 Sound Attenuation
- ○ Level 2 Motorized Dampers
- ○ Steel Enclosure
- ○ Aluminum Enclosure
- ○ AC/DC Enclosure Lighting Kit
- ○ Door Open Alarm Switch
- ○ Enclosure Heater
- ○ Extreme Cold Weather Kit

CONTROL SYSTEM

- ○ NFPA 110 Level 1 Compliant
- ○ 21-Light Remote Annunciator
- ○ Remote Output Relays (8 or 16)
- ○ Oil Temperature Sender with Indication 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)
- ○ 10A Run Relay
- ○ Ground Fault Indication and Protection Functions
- ○ Damper Alarm 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

CONTROL SYSTEM

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

GENERATOR SET

- ○ Special Testing
- ○ Battery Box

SG625 | 33.9L | 625 kW

INDUSTRIAL SPARK-IGNITED GENERATOR SET

EPA Certified Stationary Emergency

GENERAC® | INDUSTRIAL POWER

APPLICATION AND ENGINEERING DATA

DEMAND RESPONSE READY

ENGINE SPECIFICATIONS

General

Make	Generac
Cylinder #	12
Type	4 Cycle
Displacement - in^3 (L)	2,071 (33.9)
Bore - in (mm)	5.91 (150)
Stroke - in (mm)	6.30 (160)
Compression Ratio	10.0:1
Intake Air Method	Turbocharged/Intercooled
Cylinder Head	Cast Iron 4 Valve
Ignition	Electronic
Piston Type	Aluminum
Crankshaft Type	Drop Forged Steel
Lifter Type	Solid
Intake Valve Material	SUH3 with Tuftride
Exhaust Valve Material	SUH3 with Tuftride and Stellite
Hardened Valve Seats	Proprietary Alloy

Engine Governing

Governor	Electric
Frequency Regulation (Steady State)	±0.25%

Lubrication System

Oil Pump Type	Gear
Oil Filter Type	Cartridge
Crankcase Capacity with Filter - qt (L)	160 (151)

Cooling System

Cooling System Type	Unit Mounted Radiator
Fan Type	Pusher
Fan Speed - rpm	1,080
Fan Diameter - in (mm)	64 (1,625)

Fuel System

Fuel Type	Natural Gas
Carburetor	Down Draft
Secondary Fuel Regulator	Standard
Fuel Shut Off Solenoid	Standard
Operating Fuel Pressure - in H_2O (kPa)	11 - 14 (2.7 - 3.5)

Engine Electrical System

System Voltage	24 VDC
Battery Charger Alternator	Standard
Battery Size	See Battery Index 0161970SBY
Battery Voltage	(4) - 12 VDC
Ground Polarity	Negative

ALTERNATOR SPECIFICATIONS

Standard Model	LSA
Poles	4
Field Type	Rotating
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion	<5%
Telephone Interference Factor (TIF)	<50

Standard Excitation	Permanent Magnet
Bearings	Single Sealed Cartridge
Coupling	Direct via Flexible Disc
Prototype Short Circuit Test	Yes
Voltage Regulator Type	Full Digital
Number of Sensed Phases	All
Regulation Accuracy (Steady State)	±0.25%

SG625 | 33.9L | 625 kW

INDUSTRIAL SPARK-IGNITED GENERATOR SET

EPA Certified Stationary Emergency

GENERAC | INDUSTRIAL POWER

OPERATING DATA

DEMAND RESPONSE READY

POWER RATINGS - NATURAL GAS

		Standby
Three-Phase 120/208 VAC @0.8pf	625 kW	Amps: 2,169
Three-Phase 120/240 VAC @0.8pf	625 kW	Amps: 1,879
Three-Phase 277/480 VAC @0.8pf	625 kW	Amps: 940
Three-Phase 346/600 VAC @0.8pf	625 kW	Amps: 752

STARTING CAPABILITIES (sKVA)

sKVA vs. Voltage Dip

		480 VAC							208/240 VAC					
Alternator	kW	10%	15%	20%	25%	30%	Alternator	kW	10%	15%	20%	25%	30%
Standard	732	538	897	1,255	1,704	2,197	Standard	712	717	1,194	1,672	2,270	2,926
Upsize 1	732	538	897	1,255	1,704	2,197	Upsize 1	792	956	1,493	2,120	2,837	3,882
Upsize 2	912	717	1,121	1,592	2,130	2,914	Upsize 2	866	985	1,593	2,150	2,897	4,181

FUEL CONSUMPTION RATES*

Natural Gas – ft^3/hr (m^3/hr)

Percent Load	Standby
25%	2,881 (81.6)
50%	4,534 (128.4)
75%	6,187 (175.2)
100%	7,834 (221.8)

* 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)	34,000 (962.8)
Coolant Flow	gpm (lpm)	291 (1,101)
Coolant System Capacity	gal (L)	55 (208)
Heat Rejection to Coolant	BTU/hr (kW)	1,543,000 (452)
Maximum Operating Ambient Temperature	°F (°C)	122 (50)
Maximum Operating Ambient Temperature (Before Derate)		See Bulletin No. 0199270SSD
Maximum Radiator Backpressure	in H_2O (kPa)	0.5 (0.12)

COMBUSTION AIR REQUIREMENTS

	Standby
Flow at Rated Power cfm (m^3/min)	1,393.5 (424.7)

ENGINE

		Standby
Rated Engine Speed	rpm	1,800
Horsepower at Rated kW**	hp	941
Piston Speed	ft/min (m/min)	1,890 (576)
BMEP	psi (kPa)	188 (1,301)

EXHAUST

		Standby
Exhaust Flow (Rated Output)	cfm (m^3/min)	4,070 (1,240)
Maximum Exhaust Backpressure (Post Turbocharger)	in H_2O (kPa)	27 (6.72)
Exhaust Temp (Rated Output - Post Silencer)	°F (°C)	1,116 (626)

** 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
Prime - See Bulletin 0187510SSB
Demand Response - See Bulletin 10000018250

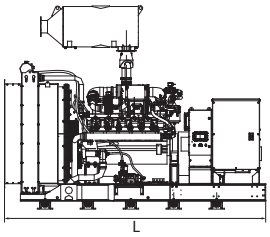
SG625 | 33.9L | 625 kW

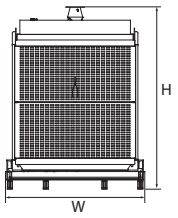
INDUSTRIAL SPARK-IGNITED GENERATOR SET

EPA Certified Stationary Emergency

DIMENSIONS AND WEIGHTS*

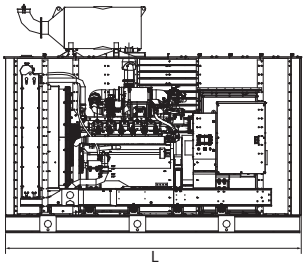
DEMAND RESPONSE READY

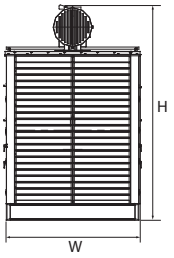




OPEN SET (Includes Exhaust Flex)

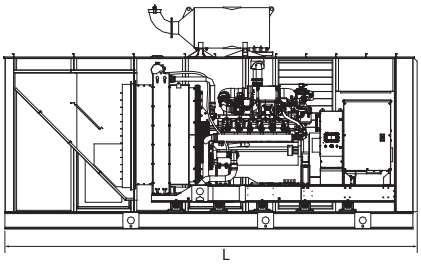
L x W x H - in (mm)	182.5 (3,495) x 84.3 (2,141) x 142.0 (3,606)
Weight - lbs (kg)	14,824 (6,724)

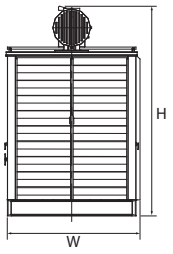




WEATHER PROTECTED ENCLOSURE

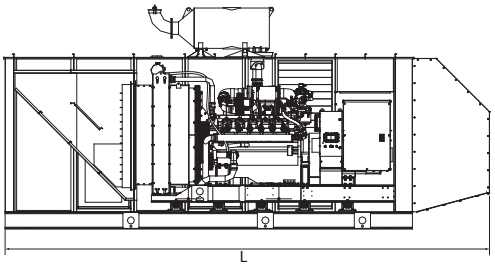
L x W x H - in (mm)	202.0 (5,130) x 98.0 (2,489) x 156.5 (3,975)
Weight - lbs (kg)	Steel: Contact Factory Aluminum: Contact Factory

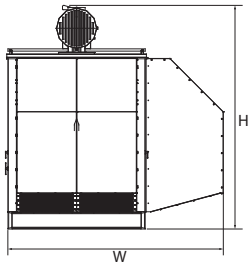




LEVEL 1 ACOUSTIC ENCLOSURE

L x W x H - in (mm)	288.0 (7,315) x 100.0 (2,540) x 156.5 (3,975)
Weight - lbs (kg)	Steel: 22,741 (10,315) Aluminum: 20,549 (9,321)





LEVEL 2 ACOUSTIC ENCLOSURE

L x W x H - in (mm)	339.9 (8,634) x 151.7 (3,852) x 156.5 (3,975)
Weight - lbs (kg)	Steel: Contact Factory Aluminum: Contact Factory

* All measurements are approximate and for estimation purposes only.

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

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

SPEC SHEET

Generac Power Systems, Inc. | P.O. Box 8 | Waukesha, WI 53189
P: (262) 544-4811

Part No. 10000022699
Rev. A 11/03/17