

SG750 | 33.9L | 750kW
INDUSTRIAL SPARK-IGNITED GENERATOR SET
EPA Certified Stationary Emergency and Non Emergency

GENERAC® | **INDUSTRIAL
POWER**

Demand Response Ready

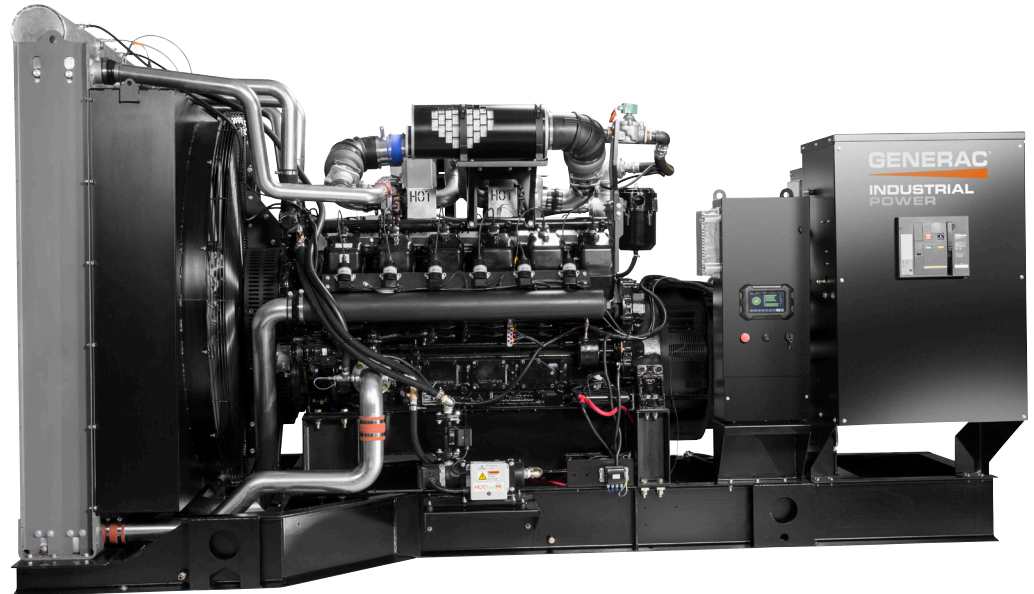
Standby Power Rating
750 kW, 938 kVA, 60 Hz

Demand Response Power Rating
750 kW, 938 kVA, 60 Hz

Prime Power Rating*
675 kW, 844 kVA, 60 Hz



*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

Not all codes and standards apply to all configurations. Contact factory for details.



UL2200, UL508, UL489



CSA C22.2, B149



BS5514 and DIN 6271



SAE J1349



NFPA 37, 70, 99, 110



NEC 700, 701, 702, 708



ISO 3046, 8528, 9001



NEMA ICS1, ICS10, MG1, 250, ICS6, AB1



ANSI/IEEE 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. But 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. Because 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.

INDUSTRIAL SPARK-IGNITED GENERATOR SET

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STANDARD FEATURES

Demand Response Ready

ENGINE SYSTEM

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

Fuel System

- NPT Fuel Connection on Frame
- Primary and Secondary Fuel Shutoff

Cooling System

- Closed Coolant Recovery System
- Factory-Installed Radiator
- 50/50 Ethylene Glycol Antifreeze
- Radiator Drain Extension
- Can Operate at up to 122°F (50°C) Ambient Temperature

Electrical System

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

ALTERNATOR SYSTEM

- UL2200 GENprotect™ Fault Protector
- Class H Insulation Material
- 2/3 Pitch
- Skewed Stator
- Permanent Magnet Excitation
- Sealed Bearings
- Amortisseur Winding
- Low Temperature Rise < 120°C

GENERATOR SET

- Spring Genset Vibration Isolators
- Separation of Circuits - High/Low Voltage
- Separation of Circuits - Multiple Breakers
- Wrapped Exhaust Piping
- Standard Factory Testing
- 2 Year Limited Warranty (Standby Rated Units)
- Ready to Accept Full Load in < 10 Seconds

ENCLOSURE (If Selected)

- High Performance Sound-Absorbing Material (Sound Attenuation Enclosures)
- Heavy Duty Gasketed Doors Made from Non-Hygroscopic Rubber
- Structural Steel Sub-Base
- Sub-Base Lifting Eyes
- Enamel Finish
- Zinc Plated Fasteners
- Zinc Plated Cast Aluminum Keylock Door Handles
- Heavy Duty Stainless Steel Hinges with Removable Brass Pins
- Bolt Together Modular Construction
- Heavy Duty Single Point Latches
- RhinoCoat™ - Textured Polyester Powder Coat Paint

CONTROL SYSTEM



Power Zone®

- NFPA 110 Level 1 Complaint
- 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 Single Point Ground
- 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 (I²T Algorithm)

7" 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
- Hourmeter
- Warning and Alarm Indication
- Diagnostics
- Maintenance Events/Information

CONFIGURABLE OPTIONS

Demand Response Ready

ENGINE SYSTEM

- Engine Block Heater
- Cold Weather Kits
- Oil Heater
- Two Stage Air Cleaner
- Air Filter Restriction Indicator
- Stone Guard (Open Set Only)

ELECTRICAL SYSTEM

- 20A Battery Charger
- Battery Warmer

FUEL SYSTEM

- NPT Flexible Fuel Line

ALTERNATOR SYSTEM

- Alternator Upsizing
- Anti-Condensation Heater

GENERATOR SET

- Extended Factory Testing
- 24 Position Load Center

MAIN LINE CIRCUIT BREAKER OPTIONS

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

CONTROL SYSTEM

- NFPA 110 Level 1 Compliant 21-Light Remote Annunciator
- Remote Output Relays (8 or 16)
- Oil Temperature Indication and 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 Engine Run Relay
- Ground Fault Annunciator
- Damper Alarm Contacts
- 100dB Alarm Horn
- 120V GFCI and 240V Outlets

ENCLOSURE

- Weather Protected Enclosure
- Level 1 Sound Attenuation
- Level 2 Sound Attenuation
- Level 1 Sound Attenuation with Motorized Dampers
- Level 2 Sound Attenuation with Motorized Dampers
- Steel Enclosure
- Aluminum Enclosure
- 120V AC Enclosure Lighting Kit
- Enclosure Ambient Heaters
- Up to 200 MPH Wind Load Rating* (Consult Factory for Availability)

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

CONTROL SYSTEM

- Additional Spare Inputs/Outputs
- Battery Disconnect Switch

ALTERNATOR SYSTEM

- 3rd Main Line Circuit Breaker
- 4th Main Line Circuit Breaker
- Unit Mounted Load Banks
- Medium Voltage Alternators

GENERATOR SET

- Special Testing
- Battery Box

APPLICATION AND ENGINEERING DATA

Demand Response Ready

ENGINE SPECIFICATIONS

General

Make	Generac
Cylinder #	12
Type	4-Cycle
Displacement - in³ (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/Aftercooled
Number of Main Bearings	7
Cylinder Head	Cast Iron
Ignition	Electronic
Piston Type	Aluminum
Crankshaft Type	Drop Forged Steel
Lifter Type	Solid
Intake Valve Material	SUH3 w/Tufride & Stellite
Exhaust Valve Material	SUH3 w/Tufride & Stellite
Hardened Valve Seats	Proprietary Alloy
Crankcase Ventilation	Closed

Engine Governing

Governor	Electronic
Frequency Regulation (Steady State)	±0.25%

Lubrication System

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

ALTERNATOR SPECIFICATIONS

Standard Model	K0912124Y22
Poles	4
Field Type	Rotating
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion	<4%
Telephone Interference Factor (TIF)	<50

Cooling System

Cooling System Type	Unit Mounted Radiator
Fan Type	Pusher
Fan Speed (rpm)	1080
Fan Diameter - mm (in)	64 (1,625)

Fuel System

Fuel Type	Natural Gas
Carburetor	Down Draft
Secondary Fuel Regulator	Standard
Fuel Shut Off Solenoid	Standard (Dual)
Operating Fuel Pressure in H2O (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

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

OPERATING DATA

Demand Response Ready

POWER RATINGS

Standby/Demand Response		
Three-Phase 120/208 VAC @0.8pf	750 kW	Amps: 2,605
Three-Phase 120/240 VAC @0.8pf	750 kW	Amps: 2,258
Three-Phase 277/480 VAC @0.8pf	750 kW	Amps: 1,129
Three-Phase 346/600 VAC @0.8pf	750 kW	Amps: 903

MOTOR STARTING CAPABILITIES (skVA)

skVA vs. Voltage Dip			
277/480 VAC	30%	208/480 VAC	30%
K0912124Y22	3,250	K1000124Y22	Contact Factory
K1000124Y22	3,900	K1220124Y22	2,500
K1220124Y22	3,250	K1440124Y22	2,450

FUEL CONSUMPTION RATES* - Natural Gas – scfh (m³/hr) [at standard conditions 68°C, 14.7 psi]

Percent Load	Standby
25%	2,718 (77)
50%	4,110 (116)
75%	5,820 (165)
100%	7,770 (220)

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

COOLING

Standby/Demand Response		
Air Flow (Radiator and Alternator)	scfm (m³/min)	32,515 (920.7)
Coolant Flow	gpm (Lpm)	291 (1,101)
Coolant System Capacity	gal (L)	55 (208)
Heat Rejection to Coolant	BTU/hr (kW)	1,639,286 (480)
Max. 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)	0.50 (0.12)

COMBUSTION AIR REQUIREMENTS

Standby/Demand Response	
Flow at Rated Power scfm (m³/min)	1,449.7 (41.1)

ENGINE

Standby/Demand Response		
Rated Engine Speed	rpm	1,800
Horsepower at Rated kW**	hp	1,118
Piston Speed	ft/min	1,890
BMEP	psi (kPa)	226 (1,561)

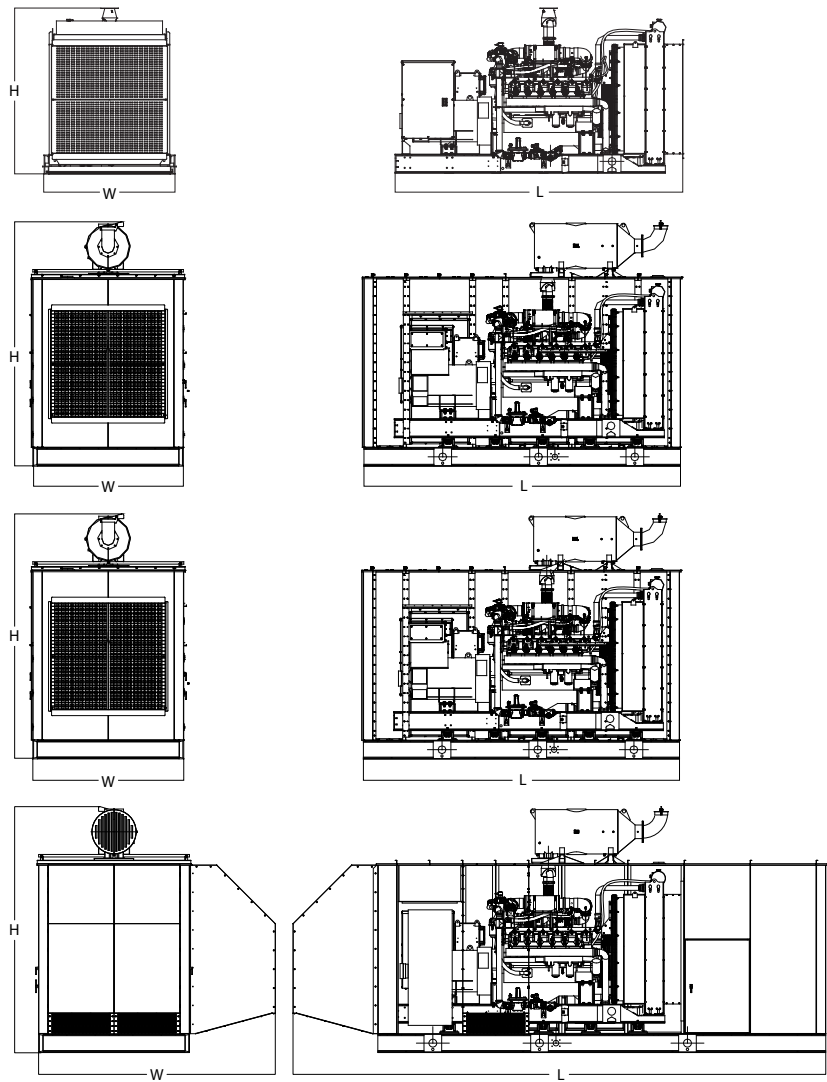
EXHAUST

Standby/Demand Response		
Exhaust Flow (Rated Output)	scfm (m³/min)	5,449 (154.3)
Max. Backpressure (Post Turbocharger)	in H ₂ O (kPa)	27 (6.7)
Exhaust Temp (Rated Output - Post Silencer)	°F (°C)	1,332 (722)

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

DIMENSIONS AND WEIGHTS*

Demand Response Ready



OPEN SET (Includes Exhaust Flex)

L x W x H - in (mm)	182.5 (4,637) x 84.3 (2,141) x 142.0 (3,606)
Weight - lbs (kg)	16,371 (7,426)

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: Contact Factory Aluminum: Contact Factory

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