**EPA Certified Stationary Emergency** 

#### STANDBY POWER RATING

200 kW, 250 kVA, 60 Hz

# **PRIME POWER RATING\***

180 kW, 225 kVA, 60 Hz





\*Built in the USA using domestic and foreign parts

<sup>\*</sup>EPA Certified Prime ratings are not available in the U.S. or its Territories.

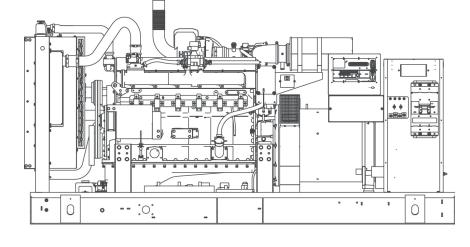


Image used for illustration purposes only

#### **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



NEMA ICS10, MG1, 250, ICS6, AB1



ANSI C62.41



os pd 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.

# GENERAC\* INDUSTRIAL POWER

#### STANDARD FEATURES

#### **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 (enclosed only)

#### Fuel System

- · Flexible fuel lines NPT Connection
- · Primary and secondary fuel filters

#### 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
- · Brushless Excitation
- Sealed Bearings
- · 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 (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
- 0.2 msec high speed data logging
- Alarm information automatically comes up on the display

#### Alarms

- Oil Pressure (Pre-programmable Low Pressure Shutdown)
- Coolant Temperature (Pre-programmed High Temp Shutdown)
- Coolant Level (Pre-programmed Low Level Shutdown)
- Low Fuel Pressure Alarm
- Engine Speed (Pre-programmed Over speed Shutdown)
- · Battery Voltage Warning
- Alarms & warnings time and date stamped
- Alarms & warnings for transient and steady state conditions
- Snap shots of key operation parameters during alarms & warnings
- Alarms and warnings spelled out (no alarm codes)

# **SG200**

| **12.9L** | 200 kW

INDUSTRIAL SPARK-IGNITED GENERATOR SET

**EPA Certified Stationary Emergency** 

# GENERAC INDUSTRIAL

#### **CONFIGURABLE OPTIONS**

#### **ENGINE SYSTEM**

General

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

Fuel Electrical System

- O 10A & 2.5A UL battery charger
- O Battery Warmer

#### **ALTERNATOR SYSTEM**

- O Alternator Upsizing
- O Anti-Condensation Heater
- O Tropical Coating

#### **CIRCUIT BREAKER OPTIONS**

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

#### **GENERATOR SET**

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

#### **ENCLOSURE**

- 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 Door Alarm Switch

#### CONTROL SYSTEM

- O 21-Light Remote Annunciator
- 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

# **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 Only
- O Battery Disconnect Switch

# **GENERATOR SET**

- O Special Testing
- O Battery Box

#### **ENCLOSURE**

- O Motorized Dampers
- O Intrusion Ambient Heaters

#### **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

# **SG200**

# | **12.9L** | 200 kW INDUSTRIAL SPARK-IGNITED GENERATOR SET

**EPA Certified Stationary Emergency** 



# **APPLICATION AND ENGINEERING DATA**

# **ENGINE SPECIFICATIONS**

General	
Make	Generac
Cylinder #	6
Туре	In-line
Displacement - L (cu In)	12.88 (785.99)
Bore - mm (in)	135 (5.31)
Stroke - mm (in)	150 (5.91)
Compression Ratio	10.92:1
Intake Air Method	Turbocharged/Aftercooled
Number of Main Bearings	7
Connecting Rods	Carbon Steel
Cylinder Head Type	Cast Iron GT250, OHV
Cylinder Head	Ductile Iron
Cylinder Liners	Altronic CD1
Piston Type	Aluminum
Crankshaft Type	Ductile Iron
Lifter Type	Solid
Intake Valve Material	Special Heat-Resistant Steel
Exhaust Valve Material	Alloy Steel, High Temp
Hardened Valve Seats	Alloy Steel, High Temp
Engine Governing	
Governor	Electronic
Frequency Regulation (Steady State)	+/- 0.25%
Lubrication System	
Oil Pump Type	Gear
Oil Filter Type	Full-Flow Cartridge

# Cooling System

Cooling System Type	Pressurized Closed Recovery
Water Pump Flow -gal/min (I/min)	79 (299)
Fan Type	Pusher
Fan Speed (rpm)	1894
Fan Diameter mm (in)	762 (30)
Coolant Heater Wattage	2000
Coolant Heater Standard Voltage	240 V

# Fuel System

Fuel Type	Natural Gas
Carburetor	Down Draft
Secondary Fuel Regulator	Standard
Fuel Shut Off Regulator	Standard
Operating Fuel Pressure (Standard)	11" - 15" H <sub>2</sub> 0
Operating Fuel Pressure (Optional)	7" - 15" H <sub>2</sub> 0

# Engine Electrical System

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

# **ALTERNATOR SPECIFICATIONS**

Crankcase Capacity - L (qts)

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

34.3 (36.2)

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%

INDUSTRIAL

#### | 12.9L | 200 kW **SG200**

# INDUSTRIAL SPARK-IGNITED GENERATOR SET

**EPA Certified Stationary Emergency** 

# **OPERATING DATA**

# **POWER RATINGS**

	Natural Gas		
Single-Phase 120/240 VAC @01.0pf	200 kW	Amps: 833	
Three-Phase 120/208 VAC @0.8pf	200 kW	Amps: 694	
Three-Phase 120/240 VAC @0.8pf	200 kW	Amps: 601	
Three-Phase 277/480 VAC @0.8pf	200 kW	Amps: 301	
Three-Phase 347/600 VAC @0.8pf	200 kW	Amps: 241	

#### STARTING CAPABILITIES (sKVA)

STARTING	CAPAB	ILITIES (S	SKVA)				sKVA vs. \	oltage Dip					
				480	VAC					208/2	40 VAC		
Alternator	kW	10%	15%	20%	25%	30%	35%	10%	15%	20%	25%	30%	35%
Standard	200	187	280	373	467	560	653	140	210	280	350	420	490
Upsize 1	250	263	395	527	658	790	922	197	296	395	494	593	692
Upsize 2	300	303	454	605	757	908	1059	227	341	454	568	681	794

# **FUEL CONSUMPTION RATES\***

# Natural Gas - ft 3/hr (m 3/hr)

Percent Load	Standby
25%	900 (25.5)
50%	1543 (43.7)
75%	2083 (59.0)
100%	2571 (72.8)

<sup>\*</sup> Fuel supply installation must accommodate fuel consumption rates at 100% load.

# **COOLING**

		Standby
Air Flow (inlet air combustion and radiator)	ft <sup>3</sup> /min (m <sup>3</sup> /in)	9432 (267)
Coolant Flow per Minute	gal/min (l/min)	79 (299)
Coolant System Capacity	gal (I)	6.1 (23.1)
Heat Rejection to Coolant	BTU/hr	670,280
Max. Operating Air Temp on Radiator	°F (°C)	122 (50)
Max. Operating Ambient Temperature (before derate)	°F (°C)	104 (40)
Maximum Radiator Backpressure	in H <sub>2</sub> 0	0.5

# **COMBUSTION AIR REQUIREMENT**

	Standby	
Flow at Rated Power cfm (m3/min)	432 (12.2)	

# **ENGINE**

# **EXHAUST**

		Standby			Standby
Rated Engine Speed	rpm	1800	Exhaust Flow (Rated Output)	cfm (m³/min)	1499 (42.4)
Horsepower at Rated kW**	hp	304	Max. Backpressure (Post Turbo)	inHg (Kpa)	1.5 (5.1)
Piston Speed	ft/min	1773 (540)	Exhaust Temp (Rated Output - post silencer)	°F (°C)	1384 (751)
BMEP	psi	179	Exhaust Outlet Size (Open Set)	mm (in)	63.5 (2.5)

<sup>\*\*</sup> Refer to "Emissions Data Sheet" for maximum bHP for EPA and SCAQMD permitting purposes.

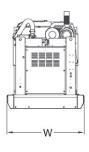
Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions. Please consult a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528. and DIN6271 standards.

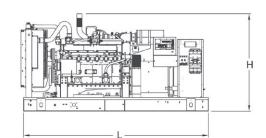
INDUSTRIAL SPARK-IGNITED GENERATOR SET



**EPA Certified Stationary Emergency** 

#### **DIMENSIONS AND WEIGHTS\***

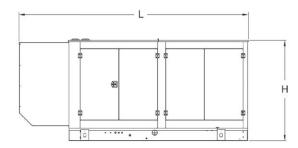




# **OPEN SET (Includes Exhaust Flex)**

L x W x H in (mm) 127.95 (3250) x 52.93 (1344.5) x 67.37 (1711.2) Weight lbs (kg) 5460 (2477)

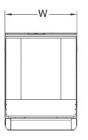


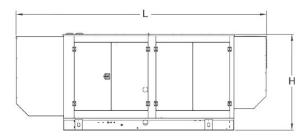


#### STANDARD ENCLOSURE

L x W x H in (mm) 153.89 (3909) x 52.73 (1339.3) x 69.67 (1769.6)

Steel: 6440 (2921) Weight lbs (kg) Aluminum: 5974 (2710)



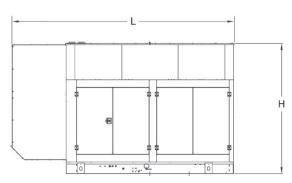


# **LEVEL 1 ACOUSTIC ENCLOSURE**

L x W x H in (mm) 180.11 (4574.7) x 52.73 (1339.3) x 69.67 (1769.6)

Steel: 6744 (3059) Weight lbs (kg) Aluminum: 6104 (2769)





#### **LEVEL 2 ACOUSTIC ENCLOSURE**

L x W x H in (mm) 154.45 (3922.9) x 53.96 (1370.6) x 93.40 (2372.3)

Steel: 6980 (3166) Weight lbs (kg) Aluminum: 6206 (2815)

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

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