

**200 kW**

**Industrial Spark-Ignited Generator Set**

Generac International Products

**14.2L**



\*Built in the USA using domestic and foreign parts

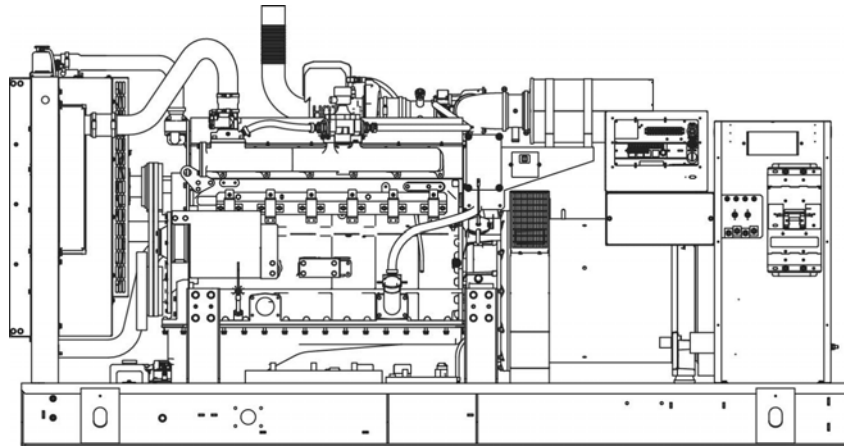


Image used for illustration purposes only

Power Ratings		
Standby	SG200	200 kW
Prime	PG180	180 kW

## Powering Ahead

For over 50 years, Generac has provided 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 applications under adverse conditions.

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

# 200 kW/180 kW

60 HZ

## Standard Features

### ENGINE SYSTEM

#### General

- Oil Drain Extension
- Heavy Duty Air Cleaner
- Fan Guard
- Stainless Steel flexible exhaust connection
- Critical Exhaust Silencer (Enclosed Only)
- Factory Filled Oil and Coolant

#### Fuel System

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

#### Cooling System

- Closed Coolant Recovery System
- UV/Ozone Resistant hoses
- Factory-installed Radiator
- 50/50 Ethylene glycol antifreeze

#### Electrical System

- Battery charging alternator
- Battery Cables
- Battery Tray
- Solenoid activated starter motor
- Rubber-booted engine electrical connections

### ALTERNATOR SYSTEM

- Class H insulation material
- 2/3 Pitch
- Skewed Stator
- Permanent Magnet 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 (Enclosed Only)
- Standard Factory Testing
- 2 Year Warranty (Standby rated units)
- 1 Year Warranty (Prime rated units)
- Silencer mounted in the discharge hood (Enclosed Only)

### ENCLOSURE

- Rust-proof fasteners with nylon washers to protect finish
- High performance sound-absorbing material
- Gasketed doors
- Stamped air-intake louvers
- Upward Facing Discharge Hoods (Radiator and Exhaust)
- Stainless steel lift off door hinges
- Stainless steel lockable handles
- Rhino Coat™ - 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
- 0.2msec High Speed Remote Trending
- Alarm Information Automatically Annunciated on the Display

#### Full System Status Display

- 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
- Alarms and Warnings
- Oil Pressure
- Coolant Temperature
- Coolant Level
- Low Fuel Pressure Alarm
- Engine Overspeed
- Battery Voltage
- Alarms & Warnings Time and Date Stamped
- Snap Shots of Key Operation Parameters During Alarms & Warnings
- Alarms and Warnings Spelled Out (No Alarm Codes)

# 200 kW/180 kW

## Configurable Options

### ENGINE SYSTEM

- General
- Engine Coolant Heater
  - Air filter Restriction Indicator
  - Stone Guard (Open Set Only)
  - Critical Exhaust Silencer (Open Set Only)

#### Electrical System

- 10A battery charger

### ALTERNATOR SYSTEM

- Alternator Upsizing
- Anti-Condensation Heater
- Tropical coating

### GENERATOR SET

- GenLink® Communications Software (English Only)
- Extended Factory Testing (3 Phase Only)
- Pad Vibration Isolators
- Up to 200 MPH Wind Load Rating\*

### CIRCUIT BREAKER OPTIONS

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

### ENCLOSURE

- Weather Protected
- Level 1 Sound Attenuation
- Level 2 Sound Attenuation
- Steel Enclosure
- Aluminum Enclosure
- AC/DC Enclosure Lighting Kits
- Door Open Alarm Switch

### CONTROL SYSTEM

- 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

## Engineered Options

### ENGINE SYSTEM

- Coolant heater ball valves
- Fluid containment pan

### ALTERNATOR SYSTEM

- 3rd Breaker Systems

### GENERATOR SET

- Special Testing
- Battery Box

### ENCLOSURE

- Motorized Dampers

### CONTROL SYSTEM

- Spare inputs (x4) / outputs (x4)
- Battery Disconnect Switch

## Rating Definitions

**Standby** – See Bulletin 0187500SSB

**Prime** – See Bulletin 0187510SSB

\*Consult factory for availability

**200 kW/180 kW**

**application and engineering data**

**ENGINE SPECIFICATIONS**

General

Make	Generac
Cylinder #	6
Type	Inline
Displacement - L (Cu In)	14.17 (864.71)
Bore - mm (in)	135 (5.31)
Stroke - mm (in)	165 (6.50)
Compression Ratio	9.5:1
Intake Air Method	Turbocharged/Aftercooled
Number of Main Bearings	7
Connecting Rods	Carbon Steel
Cylinder Head	Cast Iron GT250, OHV
Cylinder Liners	Ductile Iron
Ignition	Altronic CD1
Pistons	Aluminum
Crankshaft	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 spin-on cartridge
Crankcase Capacity - L (qts)	34.3 (36.2)

Cooling System

Cooling System Type	Pressurized Closed Recovery
Water Pump Flow - gpm (lpm)	110 (416)
Fan Type	Pusher
Fan Speed (rpm)	1894
Fan Diameter - mm (in)	762 (30)

Fuel System

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

Engine Electrical System

System Voltage	24 VDC
Battery Charger Alternator	Standard
Min. Recommended Battery Size	1155 CCA
Battery Voltage	(2) 12 VDC
Ground Polarity	Negative

**ALTERNATOR SPECIFICATIONS**

Standard Model	520mm
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	Permanent Magnet
Bearings	Sealed Ball
Coupling	Direct, Flexible Disc
Prototype Short Circuit Test	Yes

Voltage Regulator Type	Full Digital
Number of Sensed Phases	All
Regulation Accuracy (Steady State)	+/- 0.25%

# 200 kW/180 kW

# operating data

60 HZ

## POWER RATINGS – NATURAL GAS

	Natural Gas				Liquid Propane Vapor			
	Standby		Prime		Standby		Prime	
	kW	Amps	kW	Amps	kW	Amps	kW	Amps
Single-Phase 120/240 VAC @1.0pf	200 kW	833 Amps	180 kW	750 Amps	150 kW	625 Amps	135 kW	562 Amps
Three-Phase 120/208 VAC @0.8pf	200 kW	694 Amps	180 kW	625 Amps	150 kW	521 Amps	135 kW	468 Amps
Three-Phase 120/240 VAC @0.8pf	200 kW	601 Amps	180 kW	541 Amps	150 kW	542 Amps	135 kW	406 Amps
Three-Phase 277/480 VAC @0.8pf	200 kW	301 Amps	180 kW	271 Amps	150 kW	226 Amps	135 kW	203 Amps
Three-Phase 346/600 VAC @0.8pf	200 kW	241 Amps	180 kW	216 Amps	150 kW	181 Amps	135 kW	162 Amps

## STARTING CAPABILITIES (sKVA)

		sKVA vs. Voltage Dip											
		480 VAC						208/240 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\*

Percent Load	Natural Gas – ft <sup>3</sup> /hr (m <sup>3</sup> /hr)		Liquid Propane Vapor – ft <sup>3</sup> /hr (m <sup>3</sup> /hr)	
	Standby	Prime	Standby	Prime
25%	900 (25.5)	810 (22.9)	266.08 (7.53)	239.47 (6.78)
50%	1543 (43.7)	1389 (39.3)	546.42 (15.47)	491.78 (13.92)
75%	2083 (59.0)	1875 (53.1)	750.74 (21.26)	675.67 (19.13)
100%	2571 (72.8)	2314 (65.5)	948 (26.84)	853.2 (24.16)

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

## COOLING

		Standby	Prime
Air Flow (inlet air combustion and radiator)	ft <sup>3</sup> /min (m <sup>3</sup> /min)	9432 (267)	9432 (267)
System Coolant Capacity	Gal (Liters)	10.5 (39.7)	10.5 (39.7)
Heat Rejection to Coolant	BTU/hr	670,280	603,252
Maximum Additional Radiator Backpressure	in H <sub>2</sub> O	0.5	0.5

## COMBUSTION AIR REQUIREMENTS

Flow at Rated Power	cfm (m <sup>3</sup> /min)	Natural Gas		Liquid Propane Vapor	
		Standby	Prime	Standby	Prime
		432 (12.2)	389 (11.0)	349 (9.9)	328 (9.3)

## ENGINE

		Natural Gas		Liquid Propane	
		Standby	Prime	Standby	Prime
Rated Engine Speed	rpm	1800	1800	1800	1800
Horsepower at Rated kW	hp	304	273	238	190
Piston Speed	ft/min (m/min)	1773 (540)	1773 (540)	1773	1773
BMEP	psi	155	140	121	96

## EXHAUST

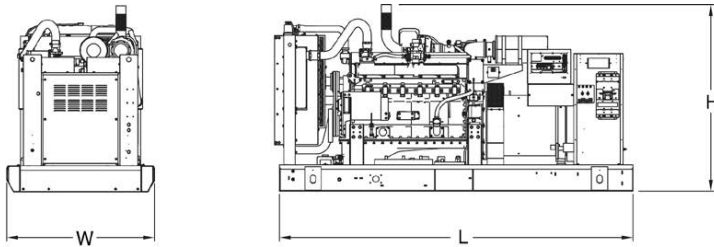
		Standby	Prime
Exhaust Flow (Rated Output)	cfm (m <sup>3</sup> /min)	1499 (42.4)	1349 (38.2)
Maximum Recommended Back Pressure (Post Silencer)	inHg	0.75	0.75
Exhaust Temp (Rated Output)	°F (°C)	1384 (751)	1246 (276)
Exhaust Outlet Size (Open Set)	in	3.5" I.D. Flex (No Silencer)	

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, IS08528 and DIN6271 standards. All power ratings are +/- 5%.

**200 kW/180 kW**

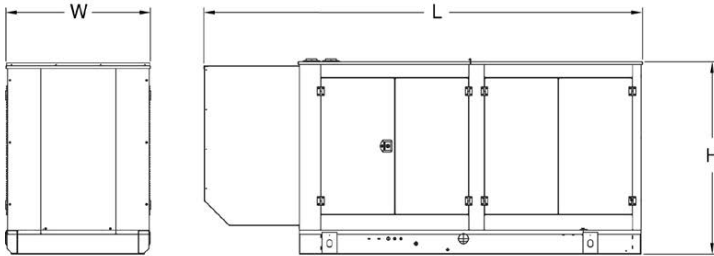
**dimensions and weights**

60 HZ



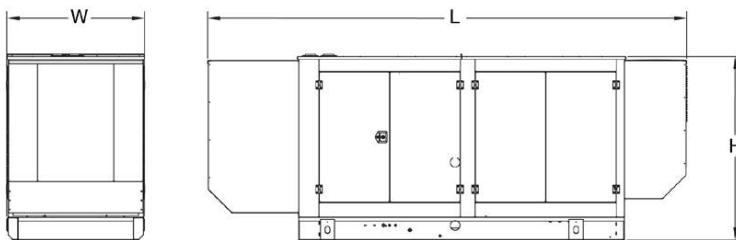
OPEN SET (Includes Exhaust Flex)

L x W x H (in (mm))	128 (3250) x 53.4 (1357) x 62.3 (1583)
Weight lbs (kg)	5460 (2477)



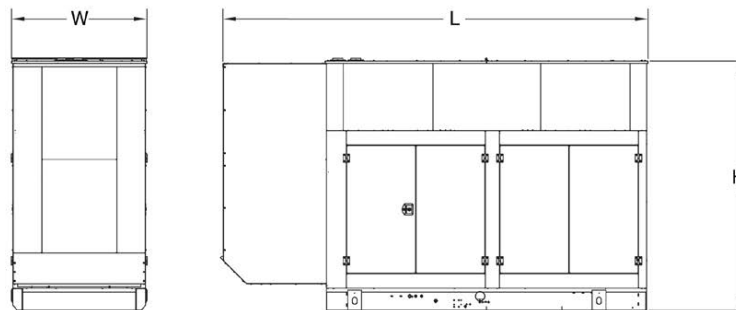
STANDARD ENCLOSURE

L x W x H (in (mm))	154.4 (3909) x 54 (1371) x 69.8 (1772)
Weight lbs (kg)	Steel: 6440 (2921) Aluminum: 5974 (2710)



LEVEL 1 ACOUSTIC ENCLOSURE

L x W x H (in (mm))	179.9 (4569) x 54 (1371) x 69.8 (1772)
Weight lbs (kg)	Steel: 6744 (3059) Aluminum: 6104 (2769)



LEVEL 2 ACOUSTIC ENCLOSURE

L x W x H (in (mm))	154.45 (3922.9) x 54 (1371) x 93.3 (2370)
Weight lbs (kg)	Steel: 6980 (3166) 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.

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