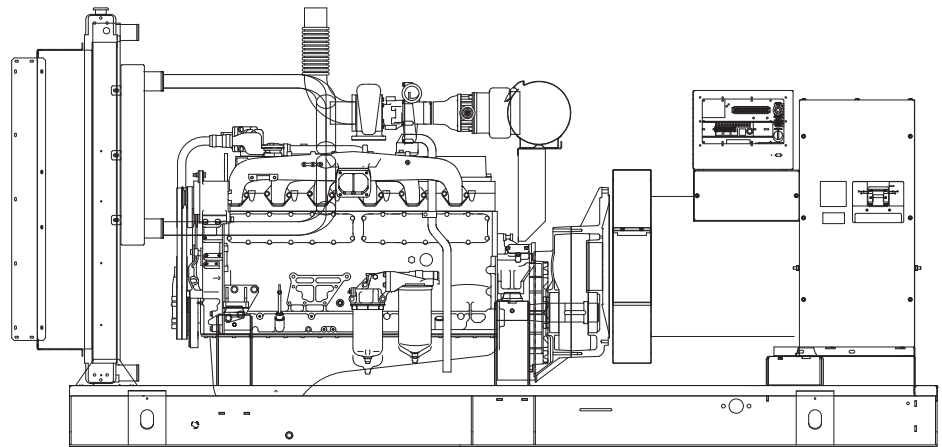


SG230

Industrial Gaseous Generator Set

EPA Certified Stationary Emergency

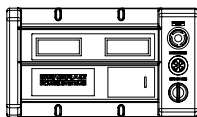
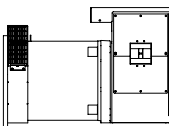
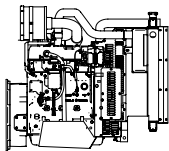
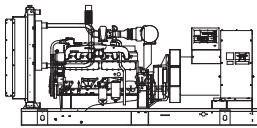
Standby Power Rating
288kVA 230kW 60 Hz



Generator image used for illustration purposes only

features

benefits



Generator Set

- PROTOTYPE & TORSIONALLY TESTED
- UL2200 TESTED
- RHINOCOAT PAINT SYSTEM
- WIDE RANGE OF ENCLOSURES
- ▶ PROVIDES A PROVEN UNIT
- ▶ ENSURES A QUALITY PRODUCT
- ▶ IMPROVES RESISTANCE TO ELEMENTS
- ▶ PROVIDES A SINGLE SOURCE SOLUTION

Engine

- EPA COMPLIANT
- INDUSTRIAL TESTED, GENERAC APPROVED
- POWER-MATCHED OUTPUT
- INDUSTRIAL GRADE
- ▶ ENVIRONMENTALLY FRIENDLY
- ▶ ENSURES INDUSTRIAL STANDARDS
- ▶ ENGINEERED FOR PERFORMANCE
- ▶ IMPROVES LONGEVITY AND RELIABILITY

Alternator

- TWO-THIRDS PITCH
- LAYER WOUND ROTOR & STATOR
- CLASS H MATERIALS
- DIGITAL 3-PHASE VOLTAGE CONTROL
- ▶ ELIMINATES HARMFUL 3RD HARMONIC
- ▶ IMPROVES COOLING
- ▶ HEAT TOLERANT DESIGN
- ▶ FAST AND ACCURATE RESPONSE

Controls

- ENCAPSULATED BOARD W/ SEALED HARNESS
- 4-20mA VOLTAGE-TO-CURRENT SENSORS
- SURFACE-MOUNT TECHNOLOGY
- ADVANCED DIAGNOSTICS & COMMUNICATIONS
- ▶ EASY, AFFORDABLE REPLACEMENT
- ▶ NOISE RESISTANT 24/7 MONITORING
- ▶ PROVIDES VIBRATION RESISTANCE
- ▶ HARDENED RELIABILITY

primary codes and standards



SG230

application and engineering data

ENGINE SPECIFICATIONS

General

Make	Generac
EPA Emissions Compliance	Stationary Emergency
EPA Emissions Reference	See Emissions Data Sheet
Cylinder #	6
Type	Inline
Displacement - L	13.3
Bore - mm (in.)	136.91 (5.39)
Stroke - mm (in.)	150.11 (5.91)
Compression Ratio	10.5:1
Intake Air Method	Turbocharged/Aftercooled
Number of Main Bearings	7
Connecting Rods	Carbon Steel
Cylinder Head	Cast Iron, Overhead Valve
Cylinder Liners	Wet, Replaceable
Ignition	Altronic CD1
Pistons	Heat Resistant Alloy
Crankshaft	Die-Forged Carbon Steel
Lifter Type	Solid
Intake Valve Material	Special Heat-Resistant Steel
Exhaust Valve Material	Iconel Alloy, High Temp
Hardened Valve Seats	High Temp Alloy Stellite Faced

Lubrication System

Oil Pump Type	Gear
Oil Filter Type	Full-Flow, Cartridge
Crankcase Capacity - L (qts)	27 (28.5)

Cooling System

Cooling System Type	Pressurized, Closed Recovery
Water Pump Flow	54 gal/min
Fan Type	Pusher
Fan Speed (rpm)	1632
Fan Diameter mm (in.)	990 (39)
Coolant Heater Wattage	2000
Coolant Heater Standard Voltage	240VAC

Fuel System

Fuel Type	Natural Gas
Carburetor	Down Draft
Secondary Fuel Regulator	Standard
Fuel Shut Off Solenoid	Standard
Operating Fuel Pressure	11" - 15" H ₂ O

Engine Electrical System

System Voltage	24VDC
Battery Charging Alternator	Std
Battery Size (at 0°C)	1155 CCA
Battery Group	8D
Battery Voltage	12VDC
Ground Polarity	Negative

ALTERNATOR SPECIFICATIONS

Standard Model	520 mm Generac
Poles	4
Field Type	Revolving
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion	< 5%
Telephone Interference Factor (TIF)	< 50
Standard Excitation	Permanent Magnent
Bearings	Sealed Ball
Coupling	Gear Drive
Load Capacity - Standby	100%
Prototype Short Circuit Test	Yes

Voltage Regulator Type	Full Digital
Number of Sensed Phases	3
Regulation Accuracy (Steady State)	± 0.25%

Engine Governing

Governor	Electronic
Frequency Regulation (Steady State)	± 0.25%

CODES AND STANDARDS COMPLIANCE (WHERE APPLICABLE)

NFPA 99	BS5514
NFPA 110	SAE J1349
ISO 8528-5	DIN6271
ISO 1708A.5	IEEE C62.41 TESTING
ISO 3046	NEMA ICS 1

Rating Definitions:

Standby – Applicable for a varying emergency load for the duration of a utility power outage with no overload capability. (Max. load factor = 70%)

Prime – Applicable for supplying power to a varying load in lieu of utility for an unlimited amount of running time. (Max. load factor = 80%) A 10% overload capacity is available for 1 out of every 12 hours.

SG230

operating data (60Hz)

POWER RATINGS (kW)

	Natural Gas	
Three-Phase 120/208VAC @0.8pf	230 kW	Amps: 799
Three-Phase 120/240VAC @0.8pf	230 kW	Amps: 692
Three-Phase 277/480VAC @0.8pf	230 kW	Amps: 346
Three-Phase 346/600VAC @0.8pf	230 kW	Amps: 277

STARTING CAPABILITIES (sKVA)

		sKVA vs. Voltage Dip											
		480VAC						208/240VAC					
Alternator	kW	10%	15%	20%	25%	30%	35%	10%	15%	20%	25%	30%	35%
Standard	230	263	395	527	658	790	922	197	296	395	494	593	692
Upsize 1	300	303	454	605	757	908	1059	227	341	454	568	681	794

FUEL

Fuel Consumption Rates*

Natural Gas		
Percent Load	ft ³ /hr	m ³ /hr
25%	1449	41.0
50%	2048	58.0
75%	2606	73.8
100%	3252	92.1

* Refer to "Emissions Data Sheet" for maximum fuel flow for EPA and SCAQMD permitting purposes.

COOLING

Air Flow (inlet air combustion and radiator)	ft ³ /min (m ³ /min)	20,118 (569.7)
System Coolant Capacity	Gal (Liters)	15 (56.8)
Heat Rejection to Coolant	BTU/hr	845,520
Max. Operating Air Temp on Radiator	°F (°C)	122 (50)
Max. Ambient Temperature	°F (°C)	104 (40)
Maximum Radiator Backpressure	"H ₂ O	1.50

COMBUSTION AIR REQUIREMENTS

Flow at Rated Power cfm 918

ENGINE

Rated Engine Speed	rpm	2300
Horsepower at Rated kW**	hp	357
Piston Speed	ft/min	2262
BMEP	psi	156

** Refer to "Emissions Data Sheet" for maximum bHP for EPA and SCAQMD permitting purposes.

EXHAUST

Exhaust Flow (Rated Output)	cfm (m ³ /min)	3266 (92.5)
Max. Backpressure (Post Silencer)	inHg	1.5
Exhaust Temp (Rated Output)	°F (°C)	1450 (787)
Exhaust Outlet Size (Open Set)	in	5.0"

SG230

standard features and options

GENERATOR SET



- Genset Vibration Isolation Std
- IBC Seismic Certified/Seismic Rated Vibration Isolators Opt
- Extended warranty Opt
- Gen-Link Communications Software Opt
- Steel Enclosure Opt
- Aluminum Enclosure Opt
- Enclosure Lighting Kits Opt

ENGINE SYSTEM



- General
- Oil Drain Extension Std
 - Oil Make-Up System Opt
 - Oil Heater Opt
 - Critical Exhaust Silencer Std
 - Stainless steel flexible exhaust connection Std
 - Air cleaner Std
 - Fan guard Std
 - Radiator duct adapter Std
- Fuel System
- Fuel lockoff solenoid Std
 - Secondary fuel regulator Std
 - Flexible fuel lines Opt
- Cooling System
- 120VAC Coolant Heater Opt
 - 208VAC Coolant Heater Opt
 - 240VAC Coolant Heater Std
 - Other Coolant Heater -
 - Closed Coolant Recovery System Std
 - UV/Ozone resistant hoses Std
 - Factory-Installed Radiator Std
 - Radiator Drain Extension Std
- Engine Electrical System
- Battery charging alternator Std
 - Battery cables Std
 - Battery tray Std
 - Battery box Opt
 - Battery heater Opt
 - Solenoid activated starter motor Std
 - 10A UL float/equalize battery charger Opt
 - Rubber-booted engine electrical connections Std

ALTERNATOR SYSTEM



- UL2200 GENprotect™ Std
- Main Line Circuit Breaker Opt
- 2nd Circuit Breaker Opt
- 3rd Circuit Breaker -
- Alternator Upsizing Opt
- Anti-Condensation Heater Opt
- Tropical coating Opt
- Permanent Magnet Generator Std

CONTROL SYSTEM



- Control Panel
- Digital H Control Panel - Dual 4x20 Display Std
 - Digital G-100 Control Panel - Touchscreen na
 - Digital G-200 Paralleling Control Panel - Touchscreen na
 - Programmable Crank Limiter Std
 - 21-Light Remote Annunciator Opt
 - Remote Relay Panel (8 or 16) Opt
 - 7-Day Programmable Exerciser Std
 - Special Applications Programmable PLC Std
 - RS-232 Std
 - RS-485 Std
 - All-Phase Sensing DVR Std
 - Full System Status Std
 - Utility Monitoring (Req. H-Transfer Switch) Std
 - 2-Wire Start Compatible Std
 - Power Output (kW) Std
 - Power Factor Std
 - Reactive Power Std
 - All phase AC Voltage Std
 - All phase Currents Std
 - Oil Pressure Std
 - Coolant Temperature Std
 - Coolant Level Std
 - Oil Temperature Opt
 - Fuel Pressure Std
 - Engine Speed Std
 - Battery Voltage Std
 - Frequency Std
 - Date/Time Fault History (Event Log) Std
 - Low-Speed Exercise -
 - Isochronous Governor Control Std
 - 40deg C - 70deg C Operation Std
 - Waterproof Plug-In Connectors Std
 - Audible Alarms and Shutdowns Std
 - Not in Auto (Flashing Light) Std
 - Auto/Off/Manual Switch Std
 - E-Stop (Red Mushroom-Type) Std
 - Remote E-Stop (Break Glass-Type, Surface Mount) Opt
 - Remote E-Stop (Red Mushroom-Type, Surface Mount) Opt
 - Remote E-Stop (Red Mushroom-Type, Flush Mount) Opt
 - NFPA 110 Level I and II (Programmable) Std
 - Remote Communication - RS232 Std
 - Remote Communication - Modem Opt
 - Remote Communication - Ethernet Opt
 - 10A Run Relay Opt

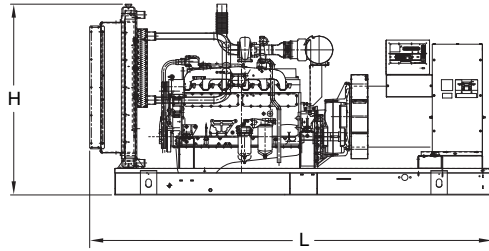
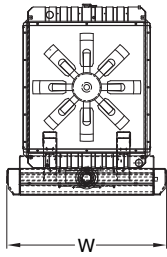
Alarms (Programmable Tolerances, Pre-Alarms and Shutdowns)

- Low Fuel Opt
- Oil Pressure (Pre-programmed Low Pressure Shutdown) Std
- Coolant Temperature (Pre-programmed High Temp Shutdown) Std
- Coolant Level (Pre-programmed Low Level Shutdown) Std
- Oil Temperature Opt
- Engine Speed (Pre-programmed Overspeed Shutdown) Std
- Voltage (Pre-programmed Overvoltage Shutdown) Std
- Battery Voltage Std

Other Options

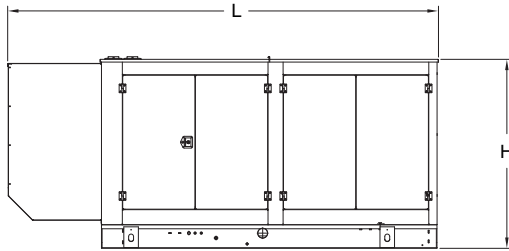
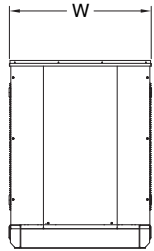
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dimensions, weights and sound levels



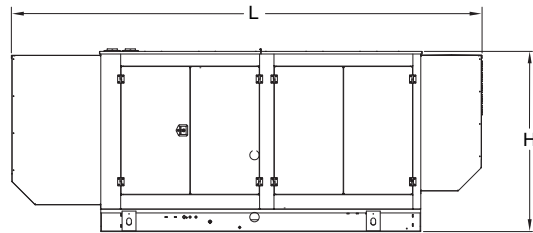
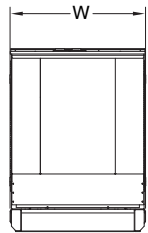
OPEN SET

L	W	H	WT	dBA*
145	58	69	7278	90



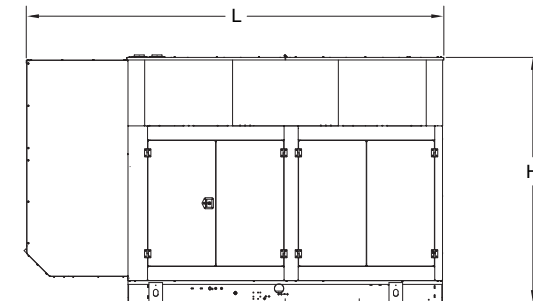
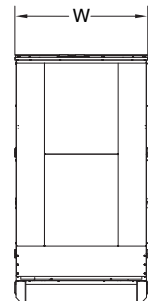
STANDARD ENCLOSURE

L	W	H	WT	dBA*
175	58	78	8578	90



LEVEL 1 ACOUSTIC ENCLOSURE

L	W	H	WT	dBA*
200	58	77	8770	81



LEVEL 2 ACOUSTIC ENCLOSURE

L	W	H	WT	dBA*
181	58	107	9728	72

*All measurements are approximate and for estimation purposes only. Sound levels measured at 23ft (7m) and does not account for ambient site conditions.

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

Specification characteristics may change without notice. Dimensions and weights are for preliminary purposes only. Please consult a Generac Power Systems Industrial Dealer for detailed installation drawings.