GENERAC® | INDUSTRIAL POWER

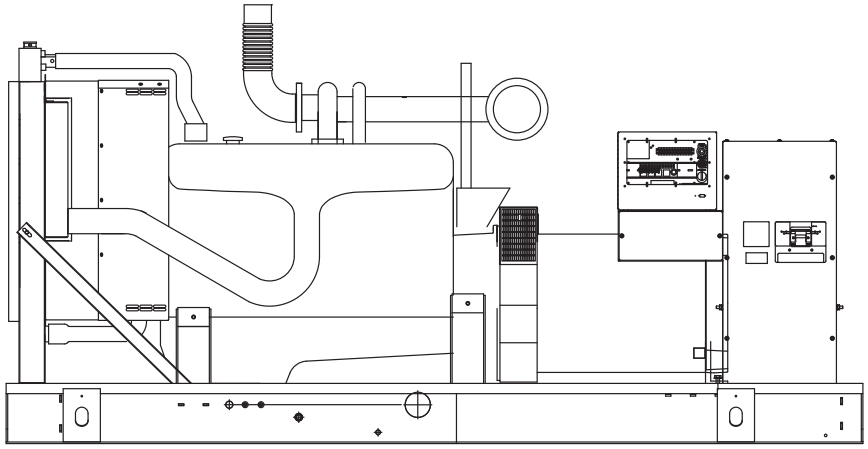
SG175

Industrial Gaseous Generator Set

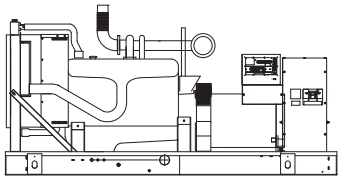
EPA Certified Stationary Emergency

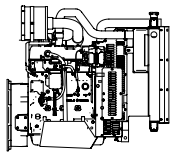
Standby Power Rating

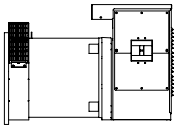
219kVA 175kW 60 Hz

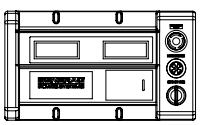


Generator image used for illustration purposes only









features benefits

Generator Set

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

Engine

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

Alternator

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

Controls

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

primary codes and standards

NEMA c UL us LISTED NFPA ASTM INTERNATIONAL ISO

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SG175 application and engineering data

ENGINE SPECIFICATIONS

General

Make	Generac
EPA Emissions Compliance	Stationary Emergency
EPA Emissions Engine 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	45 gal/min
Fan Type	Pusher
Fan Speed (rpm)	2439
Fan Diameter mm (in.)	762 (30)
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_2O

Engine Electrical System

System Voltage	24VDC
Battery Charging Alternator (Amps)	20
Battery Size	1155 CCA
Battery Group	8D
Battery Voltage	12VDC
Ground Polarity	Negative

ALTERNATOR SPECIFICATIONS

Standard Model	520
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 Magnet
Bearings	Sealed Ball
Coupling	Direct, Flexible Disc
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.

SG175 operating data (60Hz)

POWER RATINGS (kW)

	Natural Gas	
Single-Phase 120/240VAC @1.0pf	175	Amps: 729
Three-Phase 120/208VAC @0.8pf	175	Amps: 608
Three-Phase 120/240VAC @0.8pf	175	Amps: 527
Three-Phase 277/480VAC @0.8pf	175	Amps: 263
Three-Phase 346/600VAC @0.8pf	175	Amps: 211

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	175	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

Fuel Consumption Rates*

	Natural Gas	
Percent Load	ft^3/hr	m^3/hr
25%	760	21.5
50%	1240	35.1
75%	1690	47.9
100%	2225	63.0

* 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)	17792 (503.8)
System Coolant Capacity	Gal (Liters)	7.7 (29.2)
Heat Rejection to Coolant	BTU/hr	578,500
Max. Operating Air Temp on Radiator	°F (°C)	122 (50)
Max. Ambient Temperature	°F (°C)	104 (40)
Maximum Radiator Backpressure	in H_2O	1.50

COMBUSTION AIR REQUIREMENTS

Flow at Rated Power	cfm	392

ENGINE

Rated Engine Speed	rpm	1800
Horsepower at Rated kW**	hp	274
Piston Speed	ft/min	1770
BMEP	psi	150.7

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

EXHAUST

Exhaust Flow (Rated Output)	cfm (m^3/min)	945 (26.8)
Maximum Recommended Back Pressure	inHg	1.5
Exhaust Temp (Rated Output)	°F (°C)	1542 (839)
Exhaust Outlet Size (Open Set)	in	5.0"

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.

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SG175

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

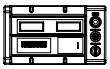
	Cooling System	
○	120VAC Coolant Heater	Opt
○	208VAC Coolant Heater	Opt
●	240VAC Coolant Heater	Std
○	Other Coolant Heater_____	Opt
●	Closed Coolant Recovery System	Std
●	UV/Ozone resistant hoses	Std
●	Factory-Installed Radiator	Std
●	Radiator Drain Extension	Std

	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

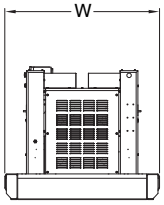


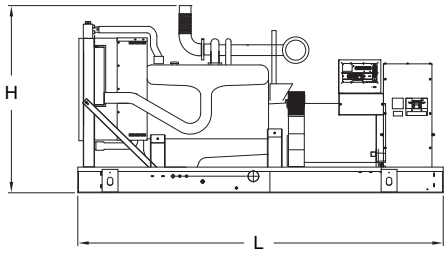
	Control Panel	
●	Digital H Control Panel - Dual 4x20 Display	Std
○	Digital G-100 Control Panel - Touchscreen	-
○	Digital G-200 Paralleling Control Panel - Touchscreen	-
●	Programmable Crank Limiter	Std
○	21-Light Remote Annunciator	Opt
○	Remote Relay Panel (8 or 16)	Opt
●	7-Day Programmable Exerciser	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	-
○	Remote Communication - Ethernet	-
○	10A Run Relay	-

	Alarms (Programmable Tolerances, Pre-Alarms and Shutdowns)	
○	Low Fuel	
●	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
○	_____
○	_____
○	_____

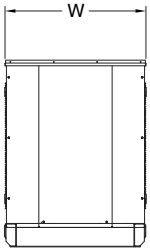
dimensions, weights and sound levels

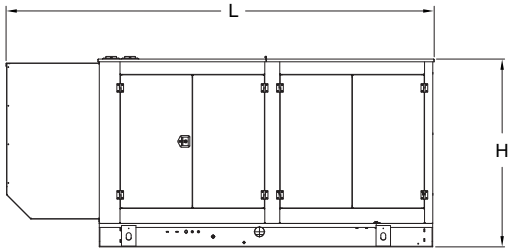




OPEN SET (Includes Exhaust Flex)

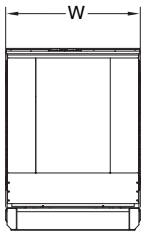
L	W	H	WT	dBA*
117	49	84	5213	91

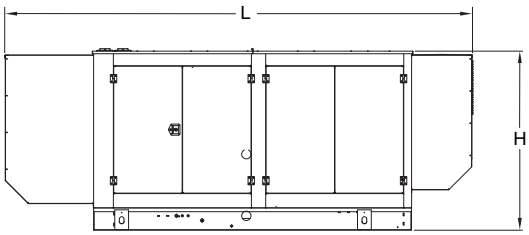




STANDARD ENCLOSURE

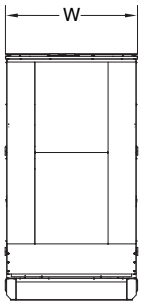
L	W	H	WT	dBA*
143	50	68	6403	90

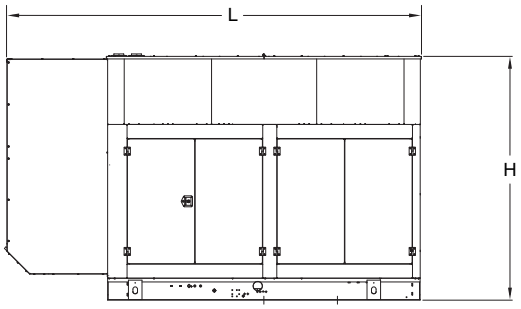




LEVEL 1 ACOUSTIC ENCLOSURE

L	W	H	WT	dBA*
169	50	68	6583	76





LEVEL 2 ACOUSTIC ENCLOSURE

L	W	H	WT	dBA*
143	50	92	7663	74

*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.