SG040 | 5.4L | 32 kW

INDUSTRIAL SPARK-IGNITED GENERATOR SET

Generac International Products

Standby Power Rating
32 kW, 40 kVA, 50 Hz

Prime Power Rating*
29 kW, 36 kVA, 50 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

Generac products are designed to the following standards:

BS5514 and DIN 6271

SAE J1349

NFPA 37, 70, 99, 110

NEC700, 701, 702, 708

ISO 3046, 7637, 8528, 9001

NEMA ICS10, MG1, 250, ICS6, AB1

ANSI C62.41

IBC 2009, CBC 2010, IBC 2012, ASCE 7-05, ASCE 7-10, ICC-ES AC-156 (2012)

Powering Ahead

Generac ensures superior quality by designing and manufacturing most of its generator components, such as alternators, enclosures, control systems and communications software. 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. 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.

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INDUSTRIAL SPARK-IGNITED GENERATOR SET

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STANDARD FEATURES

ENGINE SYSTEM

- Oil Drain Extension
- Heavy Duty Air Cleaner
- Fan Guard
- Stainless Steel Flexible Exhaust Connection
- Factory Filled Oil and Coolant
- Radiator Duct Adapter (Open Set Only)
- Critical Exhaust Silencer (Enclosed Only)

Fuel System

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

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
- Rubber-Booted Engine Electrical Connections
- Solenoid Activated Starter Motor

ALTERNATOR SYSTEM

- GENprotect™
- Class H Insulation Material
- 2/3 Pitch
- Skewed Stator
- Brushless 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 Limited Warranty (Standby Rated Units)
- 1 Year Limited 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 (Sound Attenuation Enclosures)
- Gasketed Doors
- Stamped Air-Intake Louvers
- Upward Facing Discharge Hoods (Radiator and Exhaust)
- Stainless Steel Lift Off Door Hinges
- Stainless Steel Lockable Handles
- RhinoCoat™-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
- 0.2 msec High Speed Remote Trending
- Alarm Information Automatically Annunciated on the Display

Full System Status Display

- Power Output (kW)
- Power Factor
- kW Hours, Total, and 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 and Warnings Time and Date Stamped
- Snap Shots of Key Operation Parameters During Alarms and Warnings
- Alarms and Warnings Spelled Out (No Alarm Codes)

CONFIGURABLE OPTIONS

ENGINE SYSTEM

- ○ Engine Coolant Heater
- ○ Air Filter Restriction Indicator
- ○ Flexible Fuel Line
- ○ Oil Temperature Sender
- ○ Stone Guard (Open Set Only)
- ○ Critical Exhaust Silencer (Open Set Only)

ELECTRICAL SYSTEM

- ○ 10A Battery Charger
- ○ Battery Warmer

ALTERNATOR SYSTEM

- ○ Alternator Upsizing
- ○ Anti-Condensation Heater
- ○ Tropical Coating
- ○ Permanent Magnet Excitation

CIRCUIT BREAKER OPTIONS

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

GENERATOR SET

- ○ GenLink® Communications Software (English Only)
- ○ Extended Factory Testing (3-Phase Only)
- ○ Pad Vibration Isolators

ENCLOSURE

- ○ Weather Protected Enclosure
- ○ Level 1 Sound Attenuation
- ○ Level 2 Sound Attenuation
- ○ Steel Enclosure
- ○ Aluminum Enclosure
- ○ Up to 200 MPH Wind Load Rating*
- ○ AC/DC Enclosure Lighting Kit
- ○ Door Open Alarm Switch
- ○ Enclosure Ambient Heaters

CONTROL SYSTEM

- ○ Compliant 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
- ○ Ground Fault Indication and Protection Functions

ENGINEERED OPTIONS

ENGINE SYSTEM

- ○ Coolant Heater Ball Valves
- ○ Fluid Containment Pan

ALTERNATOR SYSTEM

- ○ 3rd Breaker System

CONTROL SYSTEM

- ○ Spare Inputs (x4) / Outputs (x4)
- ○ Battery Disconnect Switch

GENERATOR SET

- ○ Special Testing
- ○ Battery Box

ENCLOSURE

- ○ Motorized Dampers

*Consult factory for availability

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Generac International Products

APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

General

Make	Generac
Cylinder #	8
Type	V
Displacement - L (Cu In)	5.4 (329.53)
Bore - mm (in)	90.17 (3.55)
Stroke - mm (in)	105.92 (4.17)
Compression Ratio	9.0:1
Intake Air Method	Naturally Aspirated
Number of Main Bearings	4
Connecting Rods	Forged Steel
Cylinder Head	Aluminum
Cylinder Liners	No
Ignition	Single Fire
Piston Type	Aluminum Alloy
Crankshaft Type	Nodular Iron
Lifter Type	Hydraulic
Intake Valve Material	Steel Alloy
Exhaust Valve Material	Hardened Steel
Hardened Valve Seats	Yes

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)	5.7 (6)

Cooling System

Cooling System Type	Pressurized Closed Recovery
Fan Type	Pusher
Fan Speed (rpm)	1,789
Fan Diameter - mm (in)	508 (20)

Fuel System

Fuel Type	Natural Gas, Propane Vapor
Carburetor	Down Draft
Secondary Fuel Regulator	Standard
Fuel Shut Off Solenoid	Standard
Operating Fuel Pressure in H_20	8 - 14

Engine Electrical System

System Voltage	12 VDC
Battery Charger Alternator	Standard
Battery Size	See Battery Index 0161970SBY
Battery Voltage	12 VDC
Ground Polarity	Negative

ALTERNATOR SPECIFICATIONS

Standard Model	Generac 390 mm
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	Synchronous Brushless
Bearings	Sealed Ball
Coupling	Direct Via Flexible Disc
Prototype Short Circuit Test	Yes
Voltage Regulator Type	Full Digital
Number of Sensed Phases	All
Regulation Accuracy (Steady State)	±0.25%

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INDUSTRIAL SPARK-IGNITED GENERATOR SET

Generac International Products

OPERATING DATA

POWER RATINGS—Natural Gas/Propane Vapor

	Standby		Prime	
Single-Phase 110/220 VAC @1.0pf	32 kVA / 32 kW	Amps: 145	29 kVA / 29 kW	Amps: 131
Three-Phase 231/400 VAC @0.8pf	40 kVA / 32 kW	Amps: 58	36 kVA / 29 kW	Amps: 52

STARTING CAPABILITIES (sKVA)

sKVA vs. Voltage Dip

231/400 VAC							
Alternator	kW	10%	15%	20%	25%	30%	35%
Standard	32	22	34	45	56	67	79
Upsize 1	40	28	43	57	71	85	100
Upsize 2	60	35	52	69	86	104	121

110/200 VAC							
Alternator	kW	10%	15%	20%	25%	30%	35%
Standard	32	13	20	27	33	40	47
Upsize 1	40	17	26	34	42	51	59
Upsize 2	60	21	31	41	51	61	72

FUEL CONSUMPTION RATES*

Natural Gas – ft³/hr (m³/hr)

Percent Load	Standby	Prime
25%	231 (6.5)	208 (5.9)
50%	395 (11.2)	356 (10.1)
75%	534 (15.1)	481 (13.6)
100%	659 (18.7)	593 (16.8)

Propane Vapor - ft³/hr (m³/hr)

Percent Load	Standby	Prime
25%	76.9 (2.2)	69.2 (2.0)
50%	131.9 (3.7)	118.7 (3.3)
75%	178 (5.0)	160.2 (4.5)
100%	219.8 (6.2)	197.8 (5.6)

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

COOLING

		Standby	Prime
Air Flow (Inlet Air Combustion and Radiator)	ft³/min (m³/min)	1,968 (55.8)	1,968 (55.8)
Coolant Flow per Minute	gal/min (l/min)	31 (117)	31 (117)
Coolant System Capacity	gal (l)	3 (11.36)	3 (11.36)
Heat Rejection to Coolant	BTU/hr	136,950	113,370
Maximum Operating Ambient Temperature	°F (°C)	122 (50)	122 (50)
Maximum Operating Ambient Temperature (Before Derate)		See Bulletin No. 019927ASSD	
Maximum Radiator Backpressure	in H_2O (kPa)	0.5 (0.12)	0.5 (0.12)

COMBUSTION AIR REQUIREMENTS

	Standby	Prime
Flow at Rated Power cfm (m³/min)	74 (2.1)	70 (2.0)

ENGINE

		Standby	Prime
Rated Engine Speed	rpm	1,500	1,500
Horsepower at Rated kW**	hp	50	40
Piston Speed	ft(m)/min	1,042 (318)	1,042 (318)
BMEP	psi	80	77

EXHAUST

		Standby	Prime
Exhaust Flow (Rated Output)	cfm (m³/min)	227 (6.4)	213 (6.0)
Maximum Exhaust Backpressure	inHg (kPa)	1.5 (5.1)	1.5 (5.1)
Exhaust Temp (Rated Output - Post Silencer)	°F (°C)	883 (473)	812 (433)

** 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.
Standby - See Bulletin 0187500SSB
Prime - See Bulletin 0187510SSB

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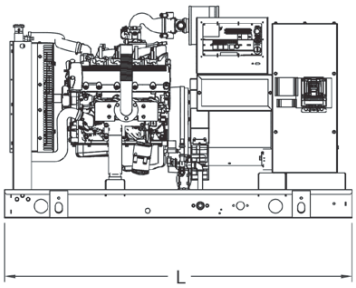
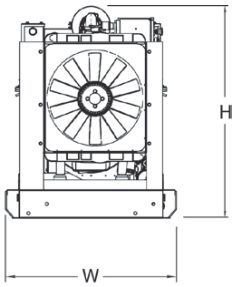
INDUSTRIAL SPARK-IGNITED GENERATOR SET

Generac International Products

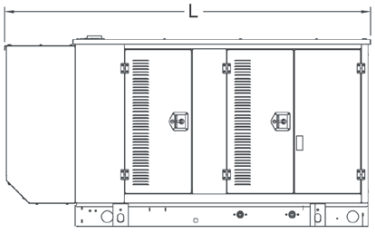
DIMENSIONS AND WEIGHTS*

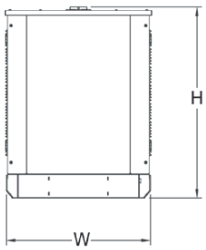




OPEN SET (Includes Exhaust Flex)

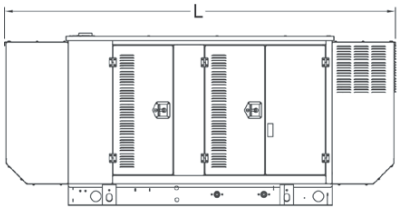
L x W x H in (mm)	76.0 (1,930.0) x 37.4 (950.0) x 46.3 (1,176.0)
Weight lbs (kg)	2,221 (1,007)

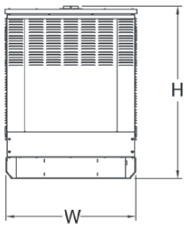




STANDARD ENCLOSURE

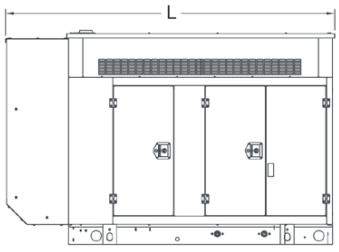
L x W x H in (mm)	94.8 (2,408.9) x 38.0 (965.1) x 49.5 (1,258.1)
Weight lbs (kg)	Steel: 2,662 (1,207) Aluminum: 2,439 (1,106)

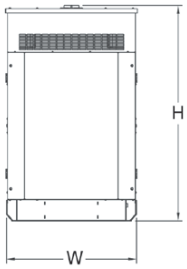




LEVEL 1 ACOUSTIC ENCLOSURE

L x W x H in (mm)	112.5 (2,857.1) x 38.0 (965.1) x 49.5 (1,258.1)
Weight lbs (kg)	Steel: 2,741 (1,243) Aluminum: 2,473 (1,122)





LEVEL 2 ACOUSTIC ENCLOSURE

L x W x H in (mm)	94.8 (2,470.0) x 38.0 (965.1) x 69.1 (1,755.0)
Weight lbs (kg)	Steel: 2,893 (1,312) Aluminum: 2,539 (1,152)

* All measurements are approximate and for estimation purposes only.

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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Part No. 0K4266B
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