Generac International Products



Standby Power Rating - MG120 150 kVA, 120 kW, 50 Hz

Prime Power Rating - WG108 135 kVA, 108 kW, 50 Hz







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

Powering Ahead

Generac ensures superior quality by designing manufacturing most of its generator components, such as enclosures. control alternators. systems 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 sparkignited engines give you more options in commercial and industrial generator applications as well as extended run time from utility-supplied natural gas.

MG120/WG108 | 14.2L | 150 kVA

INDUSTRIAL SPARK-IGNITED GENERATOR SET

Generac International Products

STANDARD FEATURES

ENGINE SYSTEM

- Oil Drain Extension
- Air Cleaner
- · Fan Guard
- Stainless Steel Flexible Exhaust Connection
- · Factory Filled Oil and Coolant
- 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

- 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 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
- 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 G-200 Paralleling Control Panel - Touchscreen

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)

PARALLELING CONTROLS

- Auto-Synchronization Process
- Isochronous Load Sharing
 Reverse Power Protection

- Maximum Power Protection
- Electrically Operated, Mechanically Held Paralleling Switch
- Sync Check System
- Independent On-Board Paralleling

MG120/WG108 | 14.2L | 150 kVA

INDUSTRIAL SPARK-IGNITED GENERATOR SET

Generac International Products

GENERAC INDUSTRIAL

CONFIGURABLE OPTIONS

ENGINE SYSTEM

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

ELECTRICAL SYSTEM

O 10A Battery Charger

ALTERNATOR SYSTEM

- Alternator Upsizing
- O Anti-Condensation Heater
- 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 Breakers

GENERATOR SET

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

ENCLOSURE

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

CONTROL SYSTEM

- O 21-Light Remote Annunciator
- O Remote Relay Assembly (8 or 16)
- Oil Temperature Sender with Indication Alarm
- O Remote E-Stop (Break Glass-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Surface Mount)
- O Remote E-Stop (Red Mushroom-Type, Flush Mount)
- O Remote Communication Modem
- O 10A Run Relay
- O Ground Fault Indication and Protection Functions
- Programmable Logic Full Auto Back-Up Control (PLS) for PM-SC

ENGINEERED OPTIONS

ENGINE SYSTEM

- O Coolant Heater Ball Valves
- O Fluid Containment Pan

ALTERNATOR SYSTEM

O 3rd Breaker Systems

CONTROL SYSTEM

Battery Disconnect Switch

GENERATOR SET

- Special Testing
- O Battery Box

ENCLOSURE

Motorized Dampers

MG120/WG108 | 14.2L | 150 kVA

INDUSTRIAL SPARK-IGNITED GENERATOR SET

Generac International Products



APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

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Make	Generac
Cylinder #	6
Туре	Inline
Displacement - L (in ³)	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	Electronic
Piston Type	Aluminum
Crankshaft Type	Ductile Iron
Lifter Type	Solid
Intake Valve Material	Special Heat-Resistant Steel
Exhaust Valve Material	High Temp Steel Alloy
Hardened Valve Seats	High Temp Steel Alloy

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 (qt)	34.3 (36.2)

Cooling System

Cooling System Type	Pressurized Closed
Water Pump Flow - Ipm (gpm)	348 (92)
Fan Type	Pusher
Fan Speed - rpm	1,581
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 - kPa (in H ₂ O)	1.7 - 2.7 (7 - 11)

Engine Electrical System

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

ALTERNATOR SPECIFICATIONS

Standard Model	Generac 520 mm
Poles	4
Field Type	Revolving
Insulation Class - Rotor	Н
Insulation Class - Stator	Н
Total Harmonic Distortion	<5%
Telephone Interference Factor (TIF)	<50

Standard Excitation	Permanent Magnet		
Bearings	Single Sealed		
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%		

50 Hz SPEC SHEET

MG120/WG108 | 14.2L | 150 kVA

INDUSTRIAL SPARK-IGNITED GENERATOR SET

Generac International Products



OPERATING DATA

POWER RATINGS - NATURAL GAS

	Standby	Prime
Three-Phase 231/400 VAC @0.8pf	150 kVA/120 kW Amps: 217	135 kVA/108 kW Amps: 195

STARTING CAPABILITIES (sKVA)

sKVA vs. Voltage Dip

231/400 VAC

Alternator	kVA	10%	15%	20%	25%	30%	35%
Standard	150	110	165	220	276	330	385
Upsize 1	175	155	232	310	388	465	542
Upsize 2	200	155	232	310	388	465	542

FUEL CONSUMPTION RATES*

Natural Gas - m³/hr (ft³/hr)

Percent Load	Standby	Prime
25%	18.5 (653)	16.7 (588)
50%	31.7 (1,119)	28.5 (1,007)
75%	42.8 (1,511)	38.5 (1,360)
100%	52.8 (1,865)	47.5 (1,679)

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

COOLING

		Standby	Prime		
Air Flow (Inlet Air Combustion and Radiator)	m³/min (ft³/min)	211.8 (7,479)	211.8 (7,479)		
Coolant Flow	lpm (gpm)	333 (88)	333 (88)		
Coolant System Capacity	L (gal)	39.7 (10.5)	39.7 (10.5)		
Heat Rejection to Coolant	BTU/hr (kW)	437,211 (128.1)	362,885 (106.4)		
Maximum Operating Ambient Temperature	°C (°F)	50 (122)	50 (122)		
Maximum Operating Ambient Temperature (Before Derate)		See Bulletin No. 019927ASSD			
Maximum Radiator Backpressure	kPa (in H ₂ 0)	0.12 (0.5)	0.12 (0.5)		

COMBUSTION AIR REQUIREMENTS

	Standby	Prime
Flow at Rated Power m ³ /min (cfm)	7.7 (272)	7.2 (256)

ENGINE				EXHAUST			
		Standby	Prime			Standby	Prime
Rated Engine Speed	rpm	1,500	1,500	Exhaust Flow (Rated Output)	m³/min (cfm)	26.6 (939)	25.0 (883)
Horsepower at Rated kW	hp	190	152	Maximum Exhaust Backpressure	kPa (inHg)	2.54 (0.75)	2.54 (0.75)
Piston Speed	m/min (ft/min)	450 (1,477)	450 (1,477)	Exhaust Temp (Rated Output - Post Silencer)	°C (°F)	684 (1,263)	628 (1,162)
BMEP	kPa (psi)	800 (116)	641 (93)				

Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions.

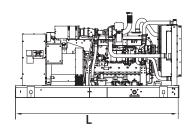
Please contact a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528, and DIN6271 standards. Standby - See Bulletin 0187500SSB

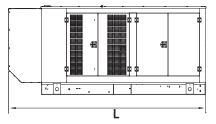
Prime - See Bulletin 0187510SSB

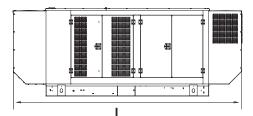
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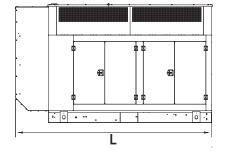
GENERAC* INDUSTRIAL POWER

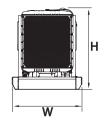
DIMENSIONS AND WEIGHTS*

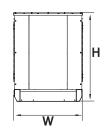


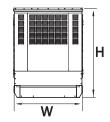


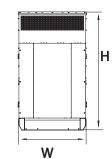












OPEN SET (Includes Exhaust Flex)

L x W x H - mm (in) 3,250 (128.0) x 1,357 (53.4) x 1,583 (62.3) Weight - kg (lbs) 2,445 (5,389)

STANDARD ENCLOSURE

L x W x H - mm (in) 3,909 (154.4) x 1,371 (54.0) x 1,772 (69.8)

Weight - kg (lbs) Steel: 2,889 (6,369) Aluminum: 2,678 (5,903)

LEVEL 1 ACOUSTIC ENCLOSURE

L x W x H - mm (in) 4,569 (179.9) x 1,371 (54.0) x 1,772 (69.8)

Steel: 3,027 (6,674)

Weight - kg (lbs)

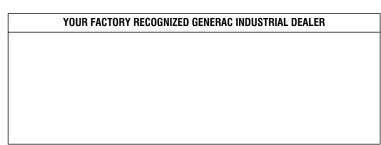
Aluminum: 2,737 (6,034)

LEVEL 2 ACOUSTIC ENCLOSURE

L x W x H - mm (in) 3,922.9 (154.45) x 1,371 (54.0) x 2,370 (93.3)

Weight - kg (lbs) Steel: 3,134 (6,909) Aluminum: 2,783 (6,135)

* All measurements are approximate and for estimation purposes only.



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