#### MG200 14.2L 200 kW

INDUSTRIAL SPARK-IGNITED GENERATOR SET

EPA Certified Stationary Emergency and Non-Emergency



# DEMAND RESPONSE READY

**Standby Power Rating** 200 kW, 250 kVA, 60 Hz

**Demand Response Rating** 200 kW, 250 kVA, 60 Hz

**Prime Power Rating** 180 kW, 225 kVA, 60 Hz



# **Codes and Standards**

Not all codes and standards apply to all configurations. Contact factory for details.



UL2200, UL6200, UL1236, UL489

BS5514 and DIN 6271

NFPA 37, 70, 99, 110

NEC700, 701, 702, 708

NEMA ICS10, MG1, 250, ICS6,



ANSI C62.41



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

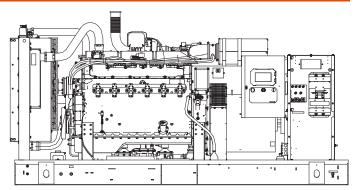


Image used for illustration purposes only

# **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 they can be found 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 LPfueled 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 owners 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 more options in commercial and industrial generator applications as well as extended run time from utility-supplied natural gas.

# INDUSTRIAL SPARK-IGNITED GENERATOR SET

EPA Certified Stationary Emergency and Non-Emergency

# **STANDARD FEATURES**

#### **ENGINE SYSTEM**

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

#### **FUEL SYSTEM**

- NPT Fuel Connection on Frame
- Primary and Secondary Fuel Shutoff

#### **COOLING SYSTEM**

- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Factory-Installed Radiator
- 50/50 Ethylene Glycol Antifreeze
- Radiator Drain Extension

# **CONTROL SYSTEM**



# Power Zone<sup>®</sup> Pro Sync Controller

#### **Program Functions**

- NFPA 110 Level 1 Compliant
- Engine Protective Functions
- Alternator Protective Functions
- Digital Engine Governor Control
- Digital Voltage Regulator
- Multiple Programmable Inputs and Outputs
- Remote Display Capability
- Remote Communication via Modbus<sup>®</sup> RTU, Modbus TCP/IP, and Ethernet 10/100
- Alarm and Event Logging with Real Time Stamping
- Expandable Analog and Digital Inputs and Outputs

## PARALLELING CONTROLS

- Paralleling Control (Synchronizing)
- Reverse Power

## **ELECTRICAL SYSTEM**

- Battery Charging Alternator
- Battery Cables
- Battery Tray
- Rubber-Booted Engine Electrical Connections
- Solenoid Activated Starter Motor

#### **ENCLOSURE (If Selected)**

- Rust-Proof Fasteners with Nylon Washers to Protect Finish
- High Performance Sound-Absorbing Material (Sound Attenuated Enclosures)
- Gasketed Doors
- Upward Facing Discharge Hood (Radiator and Exhaust)
- Stainless Steel Lift Off Door Hinges
- Stainless Steel Lockable Handles
- RhinoCoat<sup>™</sup> Textured Polyester Powder Coat Paint
- Remote Wireless Software Update Capable
- BMS and Remote Telemetry
- Built-In Programmable Logic Eliminates the Need for External Controllers Under Most Conditions
- Ethernet Based Communications Between Generators
- Programmable I/O Channel Properties
- Built-In Diagnostics
- Arc Flash Maintenance Mode (When Correctly Equipped)

#### **Alarms and Warnings**

- Low Oil Pressure
- · Low Coolant Level
- High/Low Coolant Temperature
- Sensor Failure
- Oil Temperature
- Over/Under Speed
- Over/Under Voltage
- Over/Under Frequency
- Over/Under Current
- Over Load
- High/Low Battery Voltage
- Battery Charger Current

· Load and VAR Sharing

 Phase to Phase and Phase to Neutral Short Circuits (I<sup>2</sup>T Algorithm)

· Loss of Synchronization Between Gensets

DEMAND RESPONSE READY

INDUSTRIAL

#### **GENERATOR SET**

GENERAC

- Internal Genset Vibration Isolation
- Separation of Circuits High/Low Voltage
- Separation of Circuits Multiple Breakers
- Wrapped Exhaust Piping
- Standard Factory Testing
- 2 Year Limited Warranty (Standby and Demand Response Rated Units)
- 1 Year Limited Warranty (Prime Rated Units)
- Silencer Mounted in the Discharge Hood (Enclosed Units Only)

#### **ALTERNATOR SYSTEM**

- UL2200 GENprotect™
- Motorized Main Line Circuit Breaker
- Class H Insulation Material
- 2/3 Pitch
- Skewed Stator
- Permanent Magnet Excitation
- · Sealed Bearing
- Amortisseur Winding
- Full Load Capacity Alternator

#### 7 Inch Color Touch Screen Display

Three Phase Voltage, Amperage, kW, kVA, and

Selectable Line to Line or Line to Neutral

- Resistive Color Touch Screen
- Sunlight Readable (1400 NITS)
- Easily Identifiable Icons
- Multi-Lingual

kVAr

Measurements

Frequency Engine Speed

On Screen Editable ParametersKey Function Monitoring

Engine Coolant Temperature

Warning and Alarm Indication

Maintenance Events/Information

SPEC SHEET

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**Engine Oil Pressure** 

**Battery Voltage** 

Hourmeter

Diagnostics

**Engine Oil Temperature** 

INDUSTRIAL SPARK-IGNITED GENERATOR SET

EPA Certified Stationary Emergency and Non-Emergency

# **CONFIGURABLE OPTIONS**



## **DEMAND RESPONSE READY**

#### **ENGINE SYSTEM**

- $\circ \ \ \, \text{Engine Coolant Heater}$
- $\circ \ \ \, \text{Baseframe Cover/Rodent Guard}$
- 2 Stage Air Cleaner
- $\circ ~~ \text{Oil Heater}$
- Air Filter Restriction Indicator
- $\circ~$  Radiator Stone Guard (Open Set Only)
- $\circ~$  Level 1 Fan and Belt Guards (Enclosed Units Only)

#### **FUEL SYSTEM**

o NPT Flexible Fuel Line

#### **ELECTRICAL SYSTEM**

- 10A UL Listed Battery Charger
- o Battery Warmer

#### **ALTERNATOR SYSTEM**

- Alternator Upsizing
- $\circ~$  Anti-Condensation Heater
- $\circ$   $\,$  Tropical Coating  $\,$

#### **CIRCUIT BREAKER OPTIONS**

- o Main Line Circuit Breaker
- Electronic Trip Breakers

### **GENERATOR SET**

- $\circ \ \ \, {\rm Demand} \ {\rm Response} \ \, {\rm Rating}$
- $\circ~$  Extended Factory Testing
- 12 Position Load Center
- Vapor Recovery Heater

#### ENCLOSURE

- Weather Protected Enclosure
- $\circ~$  Level 1 Sound Attenuated
- Level 2 Sound Attenuated
- Level 2 Sound Attenuated with Motorized Dampers
- Steel Enclosure
- Aluminum Enclosure
- Damper Alarm (with Motorized Dampers Only)
- Up to 200 MPH Wind Load Rating (Contact Factory for Availability)
- AC/DC Enclosure Lighting Kit
- Enclosure Heaters (with Motorized Dampers Only)
- IBC Certification
- o Door Open Alarm Switch

### **CONTROL SYSTEM**

- NFPA 110 Level 1 Compliant 21-Light Remote Annunciator
- Remote Relay Assembly (8 or 16)
- Remote E-Stop (Break Glass-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Flush Mount)
- 10A Engine Run Relay
- $\circ \ \ \, {\rm Ground} \ \, {\rm Fault} \ \, {\rm Annunciator} \\$
- o 120V GFCI and 240V Outlets
- Damper Alarm Contacts (with Motorized Dampers Only)
- $\circ~$  100 dB Alarm Horn
- Permissive/Load Shed Module

#### WARRANTY (Standby Gensets Only)

- o 2 Year Extended Limited Warranty
- 5 Year Limited Warranty
- $\circ~$  5 Year Extended Limited Warranty
- $\circ~$  7 Year Extended Limited Warranty
- $\circ~$  10 Year Extended Limited Warranty

#### **ENGINEERED OPTIONS**

#### **ENGINE SYSTEM**

• Fluid Containment Pans

#### ALTERNATOR SYSTEM

• 2nd Breaker System

#### **CONTROL SYSTEM**

o Battery Disconnect Switch

#### **GENERATOR SET**

- Special Testing
- Battery Box



INDUSTRIAL SPARK-IGNITED GENERATOR SET

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## **APPLICATION AND ENGINEERING DATA**



INDUSTRIAL

#### **ENGINE SPECIFICATIONS**

#### General

Make	Generac
Cylinder #	6
Туре	In-line
Displacement - in <sup>3</sup> (L)	5.31 (135)
Bore: in (mm)	5.31 (135)
Stroke: in (mm)	6.50 (165)
Compression Ratio	9.5:1
Intake Air Method	Turbocharged/Aftercooled
Number of Main Bearings	7
Connecting Rods	Steel Alloy
Cylinder Head	Cast Iron
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 Temperature Steel Alloy
Hardened Valve Seats	High Temperature Steel Alloy

#### **Cooling System**

Cooling System Type	Pressurized Closed Recovery
Fan Type	Pusher
Fan Speed (RPM)	1,894
Fan Diameter - in (mm)	30 (762)

GENERAC

#### **Fuel System**

Fuel Type	Natural Gas
Carburetor	Down Draft
Secondary Fuel Regulator	Standard
Fuel Shut Off Solenoid	Standard
Operating Fuel Pressure- in H <sub>2</sub> O (kPa)	7 - 11 (1.7 - 2.7)

#### **Engine Electrical System**

System Voltage	24 VDC
Battery Charger Alternator	57.5 A
Battery Size	See Battery Index 0161970SBY
Battery Voltage	(2) - 12 VDC
Ground Polarity	Negative (-)

### **Engine Governing**

Governor	Electronic
Frequency Regulation (Steady State)	±0.25%

#### Lubrication System

Oil Pump	Gear
Oil Filter Type	Full-Flow with Cartridge
Engine Oil Capacity: qt (L)	36.2 (34.3)

#### **ALTERNATOR SPECIFICATIONS**

Standard Model	K0200124Y21
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 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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### **OPERATING DATA**

### **DEMAND RESPONSE READY**

INDUSTRIAL

GENERAC

#### **POWER RATINGS - NATURAL GAS**

	Standby/Deman	d Response	Prime	
Three-Phase 120/208 VAC @0.8pf	200 kW/250 kVA	Amps: 695	180 kW/225 kVA	Amps: 625
Three-Phase 277/480 VAC @0.8pf	200 kW/250 kVA	Amps: 241	180 kW/225 kVA	Amps: 217
Three-Phase 346/600 VAC @0.8pf	200 kW/250 kVA	Amps: 241	180 kW/225 kVA	Amps: 217

#### **MOTOR STARTING CAPABILITIES (skVA)**

skVA vs. Voltage Dip				
277/480 VAC	30%	120/208 VAC	30%	
K0200124Y21	478	K0200124Y21	361	
K0250124Y21	630	K0250124Y21	506	
K0300124Y21	790	K0300124Y21	609	

#### **FUEL CONSUMPTION RATES\***

	Natural Gas – scfh (	m³/hr)
Percent Load	Standby/Demand Response	Prime
25%	960 (27.2)	900 (25.5)
50%	1,440 (40.8)	1,320 (37.4)
75%	1,980 (56.1)	1,800 (51.0)
100%	2,460 (69.7)	2,280 (64.6)
*Fuel supply installation	on must accommodate fuel consur	notion rates at 100% load

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

#### COOLING

		Standby/Demand Response	Prime
Air Flow (Fan Air Flow Across Radiator)	scfm (m <sup>3</sup> /min)	9,162 (259.4)	9,162 (259.4)
Coolant Flow	gpm (Lpm)	90 (340.7)	90 (340.7)
Coolant System Capacity	gal (L)	11 (39.7)	11 (39.7)
Maximum Operating Ambient Temperature	°F (°C)	122 (50)	122 (50)
Maximum Operating Ambient Temperature (Before Derate)		See Bulletin No. 0199270SSD	See Bulletin No. 0199270SSD
Maximum Additional Radiator Backpressure	in H <sub>2</sub> O (kPa)	0.5 (0.12)	0.5 (0.12)

#### **COMBUSTION AIR REQUIREMENTS**

	Flow at rated power scfm - (m <sup>3</sup> /min)			Standby/Demand Response 390 (11.0)	Prime 362 (10.3)			
ENGINE	EXHAUST							
		Standby/Demand Response	Prime			Standby/Demand Response	Prime	
Rated Engine Speed	RPM	1,800	1,800	Exhaust Flow	scfm (m <sup>3</sup> /min)	1,327 (38)	1,213 (34)	
Horsepower at Rated	hp	304	274	(Rated Output)				
kW** <sup>:</sup>	•			Max. Backpressure	inHg (kPa)	0.75 (2.54)	0.75 (2.54)	
Piston Speed	ft/min		1,950 (594)	(Post Silencer)				
	(m/min)			Exhaust Temp	°F (°C)	1,378 (748)	1,350 (732)	
BMEP	psi (kPa)	155 (1,065)	139 (959)	(Rated Output - Post Silencer)	. ,	( )	(	

\*\* See "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 contact a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with BS5514 and DIN6271 standards. Standby - See Bulletin 0187500SSB • Demand Response - See Bulletin 10000018250 • Prime - See Bulletin 0187510SSB

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INDUSTRIAL SPARK-IGNITED GENERATOR SET

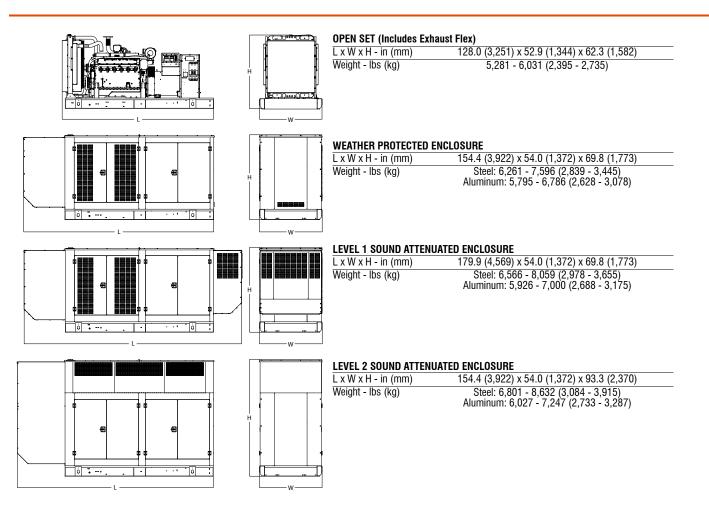
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# **DIMENSIONS AND WEIGHTS\***

# DEMAND RESPONSE READY

INDUSTRIAL

GENERAC



\* All measurements are approximate and for estimation purposes only.

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

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