

Image used for illustration purposes only

Power Ratings			
GGW275	Standby	275 kW/344 kVA	
GGWZIJ	Prime	248 kW/309 kVA	

# **Codes and Standards**

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



BS5514 and DIN 6271



**SAE J1349** 



ISO 3046, 7637, 8528, 9001



NEMA ICS10, MG1, 250, ICS6, AB1



ANSI C62.41

# **ENERGY GENERATION**

PRAMAC ensures superior quality and performance by managing all aspects of production: from design to manufacturing.

PRAMAC can trace its roots back to 1966; from then onwards it has been expanding its activity in the energy and material-handling sector, continuously growing globally with a wide and flexible product range.

In the field of power generation, PRAMAC offers solutions for every kind of power supply demand: portable and industrial generators for stand by and prime power applications, and mobile and towable lighting for outdoor needs.

PRAMAC operates through a wide distribution network and provides global coverage even in the most demanding markets.

# INDUSTRIAL SPARK-IGNITED GENERATOR SET

PRAMAC | Power Engineering Division

#### 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 Silencer (Enclosed Units 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

#### **Electrical System**

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

#### **ALTERNATOR SYSTEM**

- GENprotect<sup>™</sup>
- · 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 Units Only)
- · Standard Factory Testing
- 1 Year Limited Warranty or 1,000 Hours
- Silencer Mounted in the Discharge Hood (Enclosed Units Only)

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

- · Rust-Proof Fasteners with Nylon Washers to Protect
- · High Performance Sound-Absorbing Material (Sound Attenuated 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**



# Power Zone® 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® RTU, Modbus TCP/IP, and Ethernet 10/100
- · Alarm and Event Logging with Real Time Stamping

- · Expandable Analog and Digital Inputs and Outputs
- Remote Wireless Software Update Capable
- · Wi-Fi, Bluetooth, 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**

#### **Protections**

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

## 7 Inch Color Touch Screen Display

- Resistive Color Touch Screen
- Sunlight Readable (1400 NITS)
- · Easily Identifiable Icons
- Multi-Lingual
- On Screen Editable Parameters
- Key Function Monitoring
- Three Phase Voltage, Amperage, kW, kVA, and kVAr
- Selectable Line to Line or Line to **Neutral Measurements**
- Frequency
- Engine Speed
- . Engine Coolant Temperature
- Engine Oil Pressure
- Engine Oil Temperature
- Battery Voltage
- Hourmeter
- · Warning and Alarm Indication
- Diagnostics
- Maintenance Events/Information

### INDUSTRIAL SPARK-IGNITED GENERATOR SET

PRAMAC | Power Engineering Division

#### **CONFIGURABLE OPTIONS**



#### **ENGINE SYSTEM**

- O Engine Coolant Heater
- Oil Heater
- O Baseframe Cover/Rodent Guard
- O Air Filter Restriction Indicator
- O Radiator Stone Guard (Open Set Only)
- O Critical Silencer (Open Set Only)

#### **FUEL SYSTEM**

NPT Flexible Fuel Line

#### **ELECTRICAL SYSTEM**

O 10A Battery Charger

#### **ALTERNATOR SYSTEM**

- Alternator Upsizing
- O Anti-Condensation Heater
- O 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 Breaker

#### **GENERATOR SET**

- O Extended Factory Testing (3-Phase Only)
- Pad Vibration Isolators
- O Vapor Recovery Heater

#### **ENCLOSURE**

- O Weather Protected Enclosure
- O Level 1 Sound Attenuated
- O Level 2 Sound Attenuated
- O Level 2 Sound Attenuated with Motorized Dampers
- O Steel Enclosure
- O Aluminum Enclosure
- Up to 321 KMH Wind Load Rating (Contact Factory for Availability)
- O AC/DC Enclosure Lighting Kit
- O Door Open Alarm Switch
- O Enclosure Heater

#### **CONTROL SYSTEM**

- O 21-Light Remote Annunciator
- O Remote Relay Assembly (8 or 16)
- 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 10A Engine Run Relay
- O 100 dB Alarm Horn
- Grount Fault Annunciator
- O Damper Alarm Contacts (Motorized Dampers Only)

# **ENGINEERED OPTIONS**

#### **ENGINE SYSTEM**

- O Coolant Heater Ball Valves
- Fluid Containment Pan

#### **ALTERNATOR SYSTEM**

O 3rd Breaker System

#### **CONTROL SYSTEM**

O Battery Disconnect Switch

### **GENERATOR SET**

- O Special Testing
- O Battery Box

# INDUSTRIAL SPARK-IGNITED GENERATOR SET

PRAMAC | Power Engineering Division

# **APPLICATION AND ENGINEERING DATA**

# **ENGINE SPECIFICATIONS**

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Make	Generac
Cylinder #	6
Туре	In-line
Displacement – in <sup>3</sup> (L)	864.71 (14.2)
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	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
Engine Governing	

Governor	Electronic
Frequency Regulation (Steady State)	±0.25%

# Lubrication System

Oil Pump Type	Gear Driving
Oil Filter Type	Full-Flow Cartridge
Crankcase Capacity – qt (L)	36.2 (34.3)

# Cooling System

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

# Fuel System

Fuel Type	Natural Gas
Carburetor	Down Draft
Secondary Fuel Regulator	Standard
Fuel Shut Off Solenoid	Standard (Dual)
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	Standard
Battery Size	See Battery Index 10000016949
Battery Voltage	(2) - 12 VDC
Ground Polarity	Negative

# **ALTERNATOR SPECIFICATIONS**

Standard Model	K0300124Y21
Poles	4
Field Type	Revolving
Insulation Class - Rotor	Н
Insulation Class - Stator	Н
Total Harmonic Distortion	<5% (3-Phase)
Telephone Interference Factor (TIF)	<50

Standard Excitation	Permanent Magnet
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%

# INDUSTRIAL SPARK-IGNITED GENERATOR SET

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### **OPERATING DATA**

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

	Standby	Prime	
Three-Phase 120/208 VAC @0.8pf	275 kW/344 kVA Amps: 955	248 kW/309 kVA Amps: 860	
Three-Phase 120/240 VAC @0.8pf	275 kW/344 kVA Amps: 828	248 kW/309 kVA Amps: 745	
Three-Phase 277/480 VAC @0.8pf	275 kW/344 kVA Amps: 414	248 kW/309 kVA Amps: 373	
Three-Phase 346/600 VAC @0.8pf	275 kW/344 kVA Amps: 331	248 kW/309 kVA Amps: 298	

# **MOTOR STARTING CAPABILITIES (skVA)**

skVA vs. Voltage Dip			
277/480 VAC	30%	208/240 VAC	30%
K0300124Y21	790	K0300124Y21	609

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

# Natural Gas – ft<sup>3</sup>/hr (m<sup>3</sup>/hr)

Percent Load	Standby	Prime
25%	1,620 (45.9)	1,500 (42.5)
50%	2,160 (61.2)	1,800 (51.0)
75%	2,940 (83.3)	2,520 (71.4)
100%	3,660 (103.6)	3,120 (88.3)

<sup>\*</sup> Fuel supply installation must accommodate fuel consumption rates at 100% load.

#### COOLING

		Standby	Prime
Air Flow (Fan Air Flow Across Radiator)	scfm (m <sup>3</sup> /min)	15,946 (452)	15,946 (452)
Coolant Flow	gpm (Lpm)	90 (341)	90 (341)
Coolant System Capacity	gal (L)	14.5 (54.9)	14.5 (54.9)
Maximum Operating Ambient Temperature	°F (°C)	122 (50)	122 (50)
Maximum Operating Ambient Temperature (Before Derate)		See Bulletin 10000011339	
Maximum Radiator Backpressure	in H <sub>2</sub> O (kPa)	0.5 (0.12)	0.5 (0.12)

### **COMBUSTION AIR REQUIREMENTS**

	Standby	Prime
Flow at Rated Power - scfm (m <sup>3</sup> /min)	581 (16.5)	497 (14.1)

ENGINE				EXHAUST			
		Standby	Prime			Standby	Prime
Rated Engine Speed	RPM	1,800	1,800	Exhaust Flow (Rated Output)	scfm (m <sup>3</sup> /min)	1,985 (56.2)	1,671 (47.3)
Horsepower at Rated kW	hp	409	369	Max. Allowable Backpressure	inHg (kPa)	0.75 (2.54)	0.75 (2.54)
Piston Speed	ft/min (m/min)	1,950 (594)	1,950 (594)	Exhaust Temp (Rated Output - Post Silencer)	°F (°C)	1,385 (752)	1,355 (735)
BMEP	psi (kPa)	208 (1,433)	187 (1,292)				

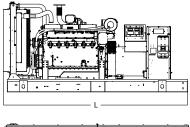
Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions. Please contact a Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528, and DIN6271 standards. Standby – See Bulletin 10000018933 Prime – See Bulletin 10000018926

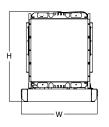
# INDUSTRIAL SPARK-IGNITED GENERATOR SET

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# **DIMENSIONS AND WEIGHTS\***

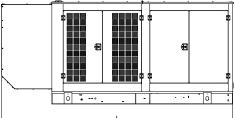


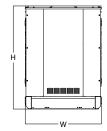




# **OPEN SET (Includes Exhaust Flex)**

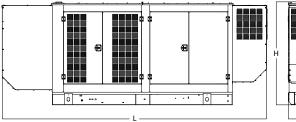
LxWxH-in (mm)	136.0 (3,454) x 57.1 (1,450) x 67.9 (1,725)
Weight - Ibs (kg)	6,200 - 6,587 (2,812 - 2,987)

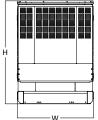




# **WEATHER PROTECTED ENCLOSURE**

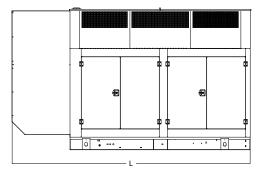
L x W x H - in (mm)	174.7 (4,437) x 57.5 (1,461) x 77.8 (1,976)
Weight - lbs (kg)	Steel: 7,535 - 7,919 (3,417 - 3,591) Aluminum: 6,978 - 7,359 (3,165 - 3,337)

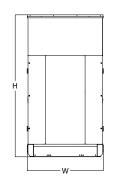




# **LEVEL 1 ACOUSTIC ENCLOSURE**

LxWxH-in (mm)	200.2 (5,085) x 57.5 (1,461) x 77.8 (1,976)
Weight - Ibs (kg)	Steel: 7,770 - 8,273 (3,524 - 3,752) Aluminum: 7,176 - 7,625 (3,254 - 3,458)





# **LEVEL 2 ACOUSTIC ENCLOSURE**

L x W x H - in (mm)	180.6 (4,587) x 57.5 (1,461) x 111.3 (2,827)
Weight - Ibs (kg)	Steel: 8,804 - 9,188 (3,993 - 4,167) Aluminum: 7,423 - 7,870 (3,366 - 3,569)

<sup>\*</sup> Specification characteristics may change without notice. Dimensions and weights are for preliminary purposes only. Please contact a PRAMAC Industrial Dealer for detailed installation drawings.