

Standby Power Rating

50 kW, 63 kVA, 60 Hz

Prime Power Rating*

45 kW, 56 kVA, 60 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

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



UL2200, UL6200, UL1236, UL489,
UL142



CSA C22.2, ULC S601



BS5514 and DIN 6271



SAE J1349



NFPA 37, 70, 99, 110



NEC700, 701, 702, 708



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

For over 60 years, Generac has provided innovative design and superior manufacturing.

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

Generac gensets utilize a wide variety of options, configurations and arrangements, allowing us to meet the standby power needs of practically every application.

Generac searched globally to ensure the most reliable engines power our generators. We choose only engines that have already been proven in heavy-duty industrial applications under adverse conditions.

Generac is committed to ensuring our customers' service support continues after their generator purchase.

STANDARD FEATURES

ENGINE SYSTEM

- Oil Drain Extension
- Air Cleaner
- Level 1 Fan and Belt Guards (Open Set Only)
- Stainless Steel Flexible Exhaust Connection
- Factory Filled Oil and Coolant
- Radiator Duct Adapter (Open Set Only)
- Critical Exhaust Silencer (Enclosed Units Only)
- Heavy Duty Air Cleaner

FUEL SYSTEM

- Fuel Lockoff Solenoid
- Primary Fuel Filter

COOLING SYSTEM

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

ELECTRICAL SYSTEM

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

ALTERNATOR SYSTEM

- UL2200 GENprotect™
- 12 Leads (3-Phase, Non 600V)
- Class H Insulation Material
- Vented Rotor
- 2/3 Pitch
- Skewed Stator
- Auxiliary Voltage Regulator Power Winding
- Brushless Excitation
- Sealed Bearing
- Automated Manufacturing (Winding, Insertion, Lacing, Varnishing)
- Rotor Dynamically Spin Balanced
- Amortisseur Winding
- Full Load Capacity Alternator
- Protective Thermal Switch

GENERATOR SET

- 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 Rated Units)
- Silencer Mounted in the Discharge Hood (Enclosed Units Only)
- Silencer of Heat Shield

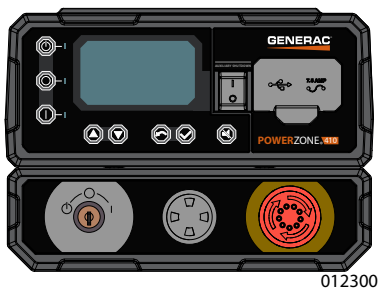
ENCLOSURE (If Selected)

- Rust-Proof Fasteners with Nylon Washers to
- Protect Finish
- High Performance Sound-Absorbing Material (Sound Attenuated Enclosures)
- Gasketed Doors
- Upward Facing Discharge Hoods (Radiator and Exhaust)
- Stainless Steel Lift Off Door Hinges
- Stainless Steel Lockable Handles
- RhinoCoat™ - Textured Polyester Powder Coat Paint

FUEL TANKS(If Selected)

- UL 142/ULC S601
- Double Wall Construction
- Vents
- Sloped Top
- Sloped Bottom
- Factory Pressure Tested (2 psi)
- Rupture Basin Alarm
- Electronic and Visual Fuel Level Indication
- Check Valve In Supply and Return Lines
- RhinoCoat™ - Textured Polyester Powder Coat Paint
- Stainless Steel Hardware

CONTROL SYSTEM



Power Zone® 410 Controller

Features

- Programmable Auto Crank
- Selectable Low Speed Exercise
- RS-232 x2
- RS-485 x2
- All-Phase Sensing Digital Voltage Regulator
- On/Off/Manual Switch
- Not in Auto (Flashing Light)
- Emergency Stop
- Modbus® RTU
- CANbus
- Full Range Standby Operation

- Power Factor
- Ruptured Tank Detection
- Auxiliary Shutdown Switch
- Remote Communications
- NFPA110 Module Included (Key Switch, Alarm, E-Stop)
- I²T Function for Full Generator Protection (Contact Factory)

Fuel System Status Display

- Multilingual 128x64 Graphical Display with Heater
- Easy Status View LED Screen
- 3-Phase AC Volts
- 3-Phase Amps
- kW
- Line Power/Gen Power
- Time
- Date
- Run Hours
- Service Reminders
- Fault History (Alarm Log)
- Oil Pressure
- Oil Temperature Indication and Alarm
- Output for Fuel Level High/Low Warning
- Water Temperature
- Water Level

- Fuel Pressure/Level
- Engine Speed
- Battery Voltage
- Alternator Frequency

Alarms and Warnings

- Common Alarm Output
- Audible Alarm and Silence

CONFIGURABLE OPTIONS

ENGINE SYSTEM

- Oil Make-Up System
- Oil Heater
- Industrial Exhaust Silencer (Open Set)
- Two-Stage Air Cleaner

FUEL SYSTEM

- Flexible Fuel Lines
- Primary Fuel Filter

ELECTRICAL SYSTEM

- 10A UL Listed Battery Charger
- Battery Warmer

ALTERNATOR SYSTEM

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

GENERATOR SET

- Extended Factory Testing (3-Phase Only)
- 8 Position Load Center

CIRCUIT BREAKER OPTIONS

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

ENCLOSURE

- Level 0 Weather Protected Enclosure
- Level 1 Sound Attenuated
- Level 2 Sound Attenuated
- Level 2 Sound Attenuated with Motorized Dampers
- Steel Enclosure
- Aluminum Enclosure
- Up to 200 MPH Wind Load Rating (Contact Factory for Availability)
- AC/DC Enclosure Lighting Kit
- Door Open Alarm Switch
- Enclosure Heater (with Motorized Dampers Only)

WARRANTY (Standby Gensets Only)

- 2 Year Extended Limited Warranty
- 5 Year Extended Limited Warranty
- 7 Year Extended Limited Warranty
- 10 Year Extended Limited Warranty

CONTROL SYSTEM

- NFPA 110 Compliant 21-Light Remote Annunciator
- Remote Relay Assembly (8 or 16)
- Oil Temperature Sender 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 Engine Run Relay
- Ground Fault Annunciator

FUEL TANKS (Side On Last Page)

- Electric Fuel Level
- Mechanical Fuel Level
- 8 in (203.2 mm) Fill Extension
- 13 in (330.2 mm) Fill Extension
- 19 in (482.6 mm) Fill Extension

ENGINEERED OPTIONS

ENGINE SYSTEM

- Coolant Heater Ball Valves
- Fluid Containment Pan
- Block Heaters

CONTROL SYSTEM

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

ALTERNATOR SYSTEM

- 3rd Breaker System

GENERATOR SET

- Special Testing
- IBC Seismic Certification

FUEL TANKS

- Overfill Protection Valve
- UL2085 Tank
- Stainless Steel Tanks
- Special Fuel Tanks (MIDEQ and FL DEP/DERM, etc.)
- Vent Extensions

APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

General

Make	Mitsubishi
Cylinder	4
Type	In-Line
Displacement - in ³ (L)	203.3 (3.331)
Bore - in (mm)	3.7 (94)
Stroke - in (mm)	4.72 (120)
Compression Ratio	19:1
Intake Air Method	Turbocharged/Aftercooled
Cylinder Head	Cast Iron
Ignition	CI
Piston Type	Aluminum

Engine Governing

Governor	Electronic
Frequency Regulation (Steady State)	±0.25%

Lubrication System

Oil Pump Type	Gear Driven
Oil Filter Type	Full Flow Cartridge
Crankcase Capacity - qt (L)	11.2 (10.6)

Cooling System

Cooling System Type	Closed Recovery
Fan Type	Pusher
Fan Speed - RPM	2,340
Fan Diameter - in (mm)	20 (508)

Fuel System

Fuel Type	Ultra Low Sulfur Diesel #2
Fuel Filtering (Microns)	10 Primary and 2 Secondary
Fuel Pump Type	In-Line
Injector Type	Mechanical
Fuel Supply Line - in (mm)	0.31 (7.94) NPT
Fuel Return Line - in (mm)	0.31 (7.94) NPT

Engine Electrical System

System Voltage	12 VDC
Battery Charger Alternator	50 A
Battery Size	See Battery Index 0161970SBY
Battery Voltage	12 VDC
Ground Polarity	Negative

ALTERNATOR SPECIFICATIONS

Standard Model	K0050124Y21
Poles	4
Field Type	Revolving
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion	<5% (3 Phase Only)
Telephone Interference Factor (TIF)	<50

Standard Excitation	Synchronous Brushless
Bearings	Sealed Ball
Coupling	Direct via Flexible Disc
Load Capacity — Standby	100%
Prototype Short Circuit Test	Yes
Voltage Regulator Type	Digital
Number of Sensed Phases	All
Regulation Accuracy (Steady State)	±0.5%

OPERATING DATA

POWER RATINGS

	Standby	
Single-Phase 120/240 VAC @1.0pf	50 kW/50 kVA	Amps: 208
Three-Phase 120/208 VAC @0.8pf	50 kW/63 kVA	Amps: 174
Three-Phase 120/240 VAC @0.8pf	50 kW/63 kVA	Amps: 151
Three-Phase 277/480 VAC @0.8pf	50 kW/63 kVA	Amps: 75
Three-Phase 346/600 VAC @0.8pf	50 kW/63 kVA	Amps: 60

MOTOR STARTING CAPABILITIES (SKVA)

skVA vs. Voltage Dip					
120/240 VAC 1Ø	30%	277/480 VAC 3Ø	30%	208/240 VAC 3Ø	30%
A0050044N21	31	K0050124Y21	98	K0050124Y21	75
A0060044N21	40	K0060124Y21	124	K0060124Y21	95

FUEL CONSUMPTION RATES*

Fuel Pump Lift- ft (m)	Diesel - gph (Lph)	
	Percent Load	Standby
4.5(1.4)	25%	1.2 (4.5)
	50%	2.3 (8.7)
Total Fuel Pump Flow (Combustion + Return) - gph (Lph)	75%	3.4 (12.9)
3.57 (13.51)	100%	4.5 (17.0)

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

COOLING

		Standby
Air Flow (Fan Air Flow Across Radiator) - Open Set	cfm (m³/hr)	2,500 (70.8)
Coolant Flow	gpm (Lpm)	34.0 (128.7)
Coolant System Capacity	gal (L)	3.0 (11.4)
Maximum Operating Ambient Temperature	°F (°C)	122 (50)
Maximum Operating Ambient Temperature (Before Derate)	See Bulletin No. 0199270SSD	
Maximum Additional Radiator Backpressure	in H2O (kPa)	0.5 (0.1)

COMBUSTION AIR REQUIREMENTS

	Standby
Flow at Rated Power cfm — (m³/min)	90 (2.5)

ENGINE

		Standby
Rated Engine Speed	rpm	1,800
Horsepower at Rated kW**	hp	85
Piston Speed	ft/min (m/min)	1,416 (431.6)
BMEP	psi (kPa)	118 (814)

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

EXHAUST

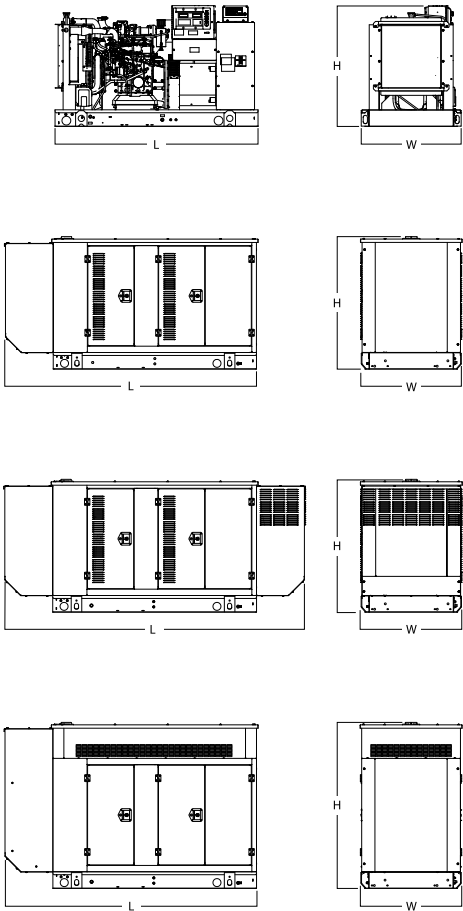
		Standby
Exhaust Flow (Rated Output)	scfm (m³/min)	230 (6.5)
Maximum Allowable Back Pressure (Post Silencer)	in H2O (kPa)	1.5 (5.1)
Exhaust Temperature (Rated Output)	°F (°C)	900 (482)

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

DIMENSIONS AND WEIGHTS*



OPEN SET

Run Time Hours**	Usable Capacity Gal (L)	L x W x H - in (mm)	Weight - lbs (kg)
No Tank	—	76.0 (1,930) x 37.4 (950) x 45.2 (1,148)	1,765 - 1,838 (801 - 834)
12	54 (204)	76.0 (1,930) x 37.4 (950) x 58.2 (1,478)	2,254 - 2,327 (1,019 - 1,052)
29	132 (500)	76.0 (1,930) x 37.4 (950) x 70.2 (1,783)	2,475 - 2,548 (1,123 - 1,156)
42	190 (719)	106.0 (2,692) x 37.4 (950) x 71.2 (1,808)	2,689 - 2,762 (1,221 - 1,254)
46	211 (799)	76.0 (1,930) x 37.4 (950) x 82.2 (2,088)	2,684 - 2,757 (1,218 - 1,251)
66	300 (1,136)	92.9 (2,360) x 37.4 (950) x 85.7 (2,177)	2,747 - 2,820 (1,246 - 1,279)
155	510 (1930)	192.5 (4,890) x 84.8(2,155) x 82.2(2,088)	3,045 - 3,173 (1,381 - 1,439)

WEATHER PROTECTED ENCLOSURE

Run Time Hours**	Usable Capacity Gal (L)	L x W x H - in (mm)	Weight - lbs (kg) Enclosure Only	
			Steel	Aluminum
No Tank	—	94.8 (2,408) x 38.0 (965) x 49.5 (1,257)	448 (203)	225 (102)
12	54 (204)	94.8 (2,408) x 38.0 (965) x 62.5 (1,588)		
29	132 (500)	94.8 (2,408) x 38.0 (965) x 74.5 (1,892)		
42	190 (719)	106.0 (2,692) x 38.0 (965) x 75.5 (1,917)		
46	211 (799)	94.8 (2,408) x 38.0 (965) x 86.5 (2,197)		
66	300 (1,136)	94.8 (2,408) x 38.0 (965) x 90.0 (2,286)		
155	510 (1930)	211.3(5,368) x 85.4(2,170) x 86.5(2,197)		

LEVEL 1 SOUND ATTENUATED ENCLOSURE

Run Time Hours**	Usable Capacity Gal (L)	L x W x H - in (mm)	Weight - lbs (kg) Enclosure Only	
			Steel	Aluminum
No Tank	—	112.5 (2,858) x 38.0 (965) x 49.5 (1,257)	527 (239)	259 (117)
12	54 (204)	112.5 (2,858) x 38.0 (965) x 62.5 (1,588)		
29	132 (500)	112.5 (2,858) x 38.0 (965) x 74.5 (1,892)		
42	190 (719)	112.5 (2,858) x 38.0 (965) x 75.5 (1,917)		
46	211 (799)	112.5 (2,858) x 38.0 (965) x 86.5 (2,197)		
66	300 (1,136)	112.5 (2,858) x 38.0 (965) x 90.0 (2,286)		
155	510 (1930)	229 (5,818) x 85.4 (2,170) x 86.5 (2,197)		

LEVEL 2 SOUND ATTENUATED ENCLOSURE

Run Time Hours**	Usable Capacity Gal (L)	L x W x H - in (mm)	Weight - lbs (kg) Enclosure Only	
			Steel	Aluminum
No Tank	—	94.8 (2,408) x 38.0 (965) x 61.9 (1,572)	617 (280)	325 (147)
12	54 (204)	94.8 (2,408) x 38.0 (965) x 74.9 (1,903)		
29	132 (500)	94.8 (2,408) x 38.0 (965) x 86.9 (2,207)		
42	190 (719)	106.0 (2,692) x 38.0 (965) x 87.9 (2,232)		
46	211 (799)	94.8 (2,408) x 38.0 (965) x 98.9 (2,512)		
66	300 (1,136)	94.8 (2,408) x 38.0 (965) x 102.4 (2,601)		
155	510 (1930)	211.3(5,368) x 85.4(2,170) x 98.9(2,512)		

*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.