

Protector® Series

GENERAC®

PROTECTOR® SERIES Standby Generators Liquid-Cooled Gaseous Engine

Protector® Series

1 of 9

INCLUDES:

- Power Zone 410 controller
- Isochronous Electronic Governor
- Sound Attenuated Enclosure
- Closed Coolant Recovery System
- Smart Battery Charger
- UV/Ozone Resistant Hoses
- Voltage and Frequency Regulation Designed for Sensitive Electronics
- 5 Year Limited Warranty
- UL 2200 Listed

Standby Power Rating

Model RG13090 (Aluminum - Bisque) - 130 kW 60 Hz

Model RG15090 (Aluminum - Bisque) - 150 kW 60 Hz



* Product may vary slightly from above image.



*Assembled in the USA using domestic and foreign parts

QUIET-TEST™



Meets EPA Emission Regulations
CA / MA Emission Compliant

FEATURES

- **INNOVATIVE DESIGN & PROTOTYPE TESTING** are key components of GENERAC'S success in "IMPROVING POWER BY DESIGN." But it doesn't stop there. Total commitment to component testing, reliability testing, environmental testing, destruction and life testing, plus testing to applicable CSA, NEMA, EGSA, and other standards, allows you to choose GENERAC POWER SYSTEMS with the confidence that these systems will provide superior performance.
- **TEST CRITERIA:**
 - ✓ **PROTOTYPE TESTED**
 - ✓ **SYSTEM TORSIONAL TESTED**
 - ✓ **NEMA MG1-22 EVALUATION**
 - ✓ **MOTOR STARTING ABILITY**
- **MOBILE LINK® CONNECTIVITY:** Free with select Protector Series standby generator sets, Mobile Link Wi-Fi allows users to monitor the generator set status from anywhere in the world using a smartphone, tablet, or PC. Easily access information such as the current operating status and maintenance alerts. Users can connect an account to an authorized service dealer for fast, friendly, and proactive service. With Mobile Link, users are taken care of before the next power outage.
- **SOLID-STATE, FREQUENCY COMPENSATED VOLTAGE REGULATION.** This state-of-the-art power maximizing regulation system is standard on all Generac models. It provides optimized FAST RESPONSE to changing load conditions and MAXIMUM MOTOR STARTING CAPABILITY by electronically torque-matching the surge loads to the engine.
- **SINGLE SOURCE SERVICE RESPONSE** from Generac's extensive dealer network provides parts and service know-how for the entire unit, from the engine to the smallest electronic component.
- **GENERAC TRANSFER SWITCHES.** Long life and reliability are synonymous with GENERAC POWER SYSTEMS. One reason for this confidence is the GENERAC product line is offered with its own transfer systems and controls for total system compatibility.

GENERAC®

130 / 150 kW

GENERATOR SPECIFICATIONS

	130 / 150 kW
Type	Synchronous
Rotor Insulation Class	H
Stator Insulation Class	H
Telephone Interference Factor (TIF)	< 50
Alternator Output Leads 1-Phase	4 wire
Alternator Output Leads 3-Phase	12 wire
Bearings	Sealed Ball
Coupling	Flexible Disc
Excitation System	Synchronous Brushless
Total Harmonic Distortion	< 5%

VOLTAGE REGULATION

Type	Full Digital
Sensing	All
Regulation	Designed for Sensitive Electronics

GOVERNOR SPECIFICATIONS

Type	Electronic
Frequency Regulation	Isochronous
Steady State Regulation	Designed for Sensitive Electronics

ELECTRICAL SYSTEM

Battery Charger Alternator	40 Amp
Static Battery Charger	5 Amp
Recommended Battery (battery included)	Group 31, 925 CCA
System Voltage	12 Volts

GENERATOR FEATURES

Revolving field heavy duty generator Directly connected to the engine Operating temperature rise 135° C above 25° C ambient Class H insulation is NEMA rated All models fully prototyped tested

ENCLOSURE FEATURES

Aluminum weather protective enclosure	Ensures protection against mother nature. Electrostatically applied textured epoxy paint for added durability.
Enclosed critical grade muffler	Quiet, critical grade muffler is mounted inside the unit to prevent injuries.
Small, compact, attractive	Makes for an easy, eye appealing installation.
SAE	Sound attenuated enclosure ensures quiet operation.

(All ratings in accordance with BS5514, ISO3046, ISO8528, SAE J1349 and DIN6271)

ENGINE SPECIFICATIONS

	130 / 150 kW
Make	Generac
Type	V
Cylinders	8
Displacement - In ³ (L)	540 (8.86)
Bore (in / mm)	4.5 / 114.3
Stroke (in / mm)	4.25 / 107.95
Compression Ratio (Turbo Charged)	9.1:1
Intake Air System	Turbocharged and Aftercooled
Lifter Type	Hydraulic Roller

ENGINE LUBRICATION SYSTEM

Oil Pump Type	Gear
Oil Filter Type	Full Flow Spin-On Cartridge
Crankcase Capacity (qt / L)	10.5 / 9.9

ENGINE COOLING SYSTEM

Type	Pressurized Closed
Water Pump	Belt-Driven
Fan Speed (rpm)	2,330
Fan Diameter (in / cm)	22 (55.9)
Fan Mode	Pusher

FUEL SYSTEM

Fuel Type	Natural Gas, Propane Vapor
Carburetor	Down Draft
Secondary Fuel Regulator	Standard
Fuel Shut Off Solenoid	Standard
LP Fuel Pressure	7 - 11 in Water Column
NG Fuel Pressure	7 - 11 in Water Column

130 / 150 kW

GENERATOR OUTPUT VOLTAGE/kW - 60 Hz

		kW LPG	Amp LPG	kW Nat. Gas	Amp Nat. Gas	CB Size (Both)
RG13090	120/240 V, 1Ø, 1.0 pf	130	542	130	542	600
	120/208 V, 3Ø, 0.8 pf	130	451	130	451	500
	120/240 V, 3Ø, 0.8 pf	130	391	130	391	400
	277/480 V, 3Ø, 0.8 pf	130	195	130	195	225
RG15090	120/240 V, 1Ø, 1.0 pf	134	558	144	600	700
	120/208 V, 3Ø, 0.8 pf	140	486	150	520	600
	120/240 V, 3Ø, 0.8 pf	140	421	150	451	500
	277/480 V, 3Ø, 0.8 pf	140	210	150	226	250

SURGE CAPACITY IN AMPS

		Voltage Dip 30%
RG13090	120 / 240 V, 1Ø	854
	120 / 208 V, 3Ø	816
	120 / 240 V, 3Ø	707
	277 / 480 V, 3Ø	351
RG15090	120 / 240 V, 1Ø	617
	120 / 208 V, 3Ø	619
	120 / 240 V, 3Ø	536
	277 / 480 V, 3Ø	351

ENGINE FUEL CONSUMPTION

		Natural Gas		Propane	
		(ft³ / hr)	(m³ / hr)	(ft³ / hr)	(m³ / hr)
RG13090	25% of rated load	509	14.4	172	4.9
	50% of rated load	858	24.3	278	7.9
	75% of rated load	1,206	34.1	385	10.9
	100% of rated load	1,555	44.0	491	13.9
RG15090	25% of rated load	562	15.9	187	5.3
	50% of rated load	963	27.3	306	8.7
	75% of rated load	1,370	38.8	432	12.2
	100% of rated load	1,768	50.1	559	15.8

Note: **Fuel pipe must be sized for full load.**

For BTU content, multiply ft³ / hr x 2,520 (LP) or ft³ / hr x 1,000 (NG).

For megajoule content, multiply m³ / hr x 93.15 (LP) or m³ / hr x 37.26 (NG).

Refer to "Emissions Data Sheets" for maximum fuel flow for EPA and SCAQMD permitting purposes.

STANDBY RATING: Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-3046-1. Design and specifications are subject to change without notice.

130 / 150 kW

operating data

ENGINE COOLING

	130 kW	150 kW
Air Flow (Fan Air Flow Across Radiator) - Open Set scfm (m ³ / min)	5,415 (153.3)	5,598 (158.5)
System Coolant Capacity (gal / liters)	6.3 (24.0)	6.3 (24.0)
Heat Rejection to Coolant (BTU per hr / MJ per hr)	Contact Factory	Contact Factory
Maximum Operation Air Temperature on Radiator (°F / °C)	Contact Factory	Contact Factory
Maximum Ambient Temperature (°F / °C)	122 (50)	122 (50)

COMBUSTION REQUIREMENTS

Flow at Rated Power scfm (m ³ /min)	371 (10.5)	343 (9.7)
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SOUND EMISSIONS

Sound Output in dB(A) at 23 ft (7 m) With Generator*	75 db	80 db
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*In normal operation

EXHAUST

Exhaust Flow at Rated Output scfm (m ³ /min)	1,198 (34.0)	1,206 (34.1)
Exhaust Temperature (Rated Output) °F (°C)	1,285 (696)	1,440 (782)

ENGINE PARAMETERS

Rated Engine Speed (RPM)	1,800	1,800
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POWER ADJUSTMENT FOR AMBIENT CONDITIONS

Temperature Deration RG13090 on NG & LP	77°F before derate	3.3% per 10°F above 77°F
Temperature Deration RG15090 on NG	77°F before derate	4% per 5°F above 77°F
Temperature Deration RG15090 on LP	77°F before derate	5.5% per 5°F above 77°F
Altitude Deration (130kW)	3% for every 1,000 ft above 600 ft	
Altitude Deration (150 kW)	2.1% for every 1,000 ft above 600 ft	

CONTROLLER FEATURES

Standard Features

128 x 64 Graphical Display with Heater	Multi-Lingual	Full System Status
Three Phase Sensing Digital Voltage Regulator	Full Range Standby Operation	Remote Communication
Programmable Auto Crank	Emergency Stop	On / Off Manual Switch
Not in Auto Flashing Light	Selectable Low Speed Exercise	NFPA 110 Capable**
5 A Integrated Battery Charger***		
Full System Status: •Three Phase AC Volts •Three Phase Amps •kW •Power Factor •Oil Pressure •Water Temperature •Oil Temperature* •Oil Level* •Fuel Pressure and Level •Engine Speed •Battery Voltage •Alternator Frequency •Time •Date •Line Power and Gen Power •Run Hours •Service Reminders •Fault History (Alarm Log)		

Standard Protections

Low Oil Pressure	Low Coolant Level	High / Low Coolant Temperature
Oil Temperature	Over / Under Speed	Over / Under Voltage
Over / Under Frequency	Over / Under Current	Over Load
Battery Voltage	Battery Charger Current	Phase to Phase and Phase to Neutral Short Circuits (I ² T Algorithm)
Ground Fault		

Display

Easy Menu Structure	Multi-Lingual	On Screen Editable Parameters
Key Function Monitoring: •Three Phase Voltage, Amperage, kW, kVa, and kVAr •Selectable Average or Line to Neutral Voltage Measurements •Frequency •RPM •Engine Coolant Temperature •Engine Oil Temperature •Battery Voltage •Warning and Alarm Indication •Diagnostics •Maintenance Events / Information •Hourmeter		

Control Panel

Audible Alarm and Silence†	Auxiliary Shutdown Rocker Switch	Not in Auto Indication
AUTO / OFF / MANUAL: •Operation Through Onboard Buttons or Optional Key Switch •Indication Through Display Screen and LEDs		

* Optional; When Available.

** See NFPA 110 in Accessory Section.

*** Operation Disabled when Optional 10A Battery Charger is Installed.

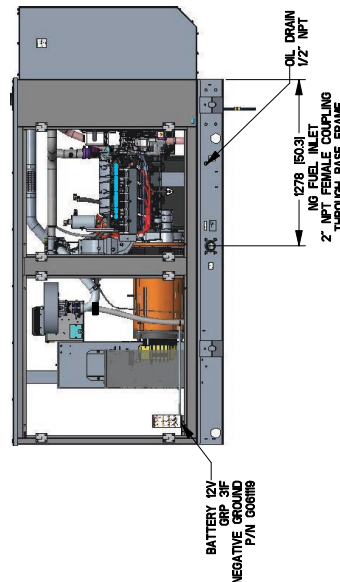
† When Selected; See Modular NFPA 110 Components Section.

Model #	Product	Description
G009883-0	Cold Weather Kit	If the temperature regularly falls below 32 °F (0 °C), install a cold weather kit to maintain optimal battery temperature. Kit consists of battery warmer with thermostat built into the wrap.
G009884-0	Extreme Cold Weather Kit	Recommended where the temperature regularly falls below 32 °F (0 °C) for extended periods of time. For liquid cooled units only.
G005651-0	Base Plug Kit	Add base plugs to the base of the generator to keep out debris.
G005703-0 - Bisque	Paint Kit	If the generator enclosure is scratched or damaged, it is important to touch-up the paint to protect from future corrosion. The paint kit includes the necessary paint to properly maintain or touch-up a generator enclosure.
G009882-0	Scheduled Maintenance Kit	The Liquid-Cooled Scheduled Maintenance Kits offer all the hardware necessary to perform complete maintenance on Generac liquid-cooled generators.
G006510-0	E-Stop	E-stop allows for immediate fuel shutoff and generator shutdown in the event of an emergency.
G007005-0	Wi-Fi LP Fuel Level Monitor	The Wi-Fi enabled LP fuel level monitor provides constant monitoring of the connected LP fuel tank. Monitoring the LP tank's fuel level is an important step in making sure your generator is ready to run during an unexpected power failure. Status alerts are available through a free application to notify when your LP tank is in need of a refill.
G007000-0 (50 amp) G007006-0 (100 amp)	Smart Management Module	Smart Management Modules (SMM) are used to optimize the performance of a standby generator. They manage large electrical loads upon startup and shed them to aid in recovery when overloaded. In many cases, using SMM's can reduce the overall size and cost of the system.
G009885-0	400 A CB Kit	400 A Circuit Breaker Kit designed for three phase products built with a factory installed circuit breaker greater than 400 A.
A0000018981	Ultrasonic Cleaner Solution	An ultra-concentrated anti-corrosive cleaning solution engineered to reach the smallest cavities to clean the toughest contaminants. This water based formula is non-toxic, biodegradable, safe for both metal and plastic surfaces, and is superior in rinsability.
A0000019001	All Surface Protectant	All surface protectant for vinyl, rubber, plastics creates a barrier that seals & protects surfaces from water, UV rays while renewing the look of the surface.
G0074110	Phase Sense Kit, 120-240 V, PZ410	3-Phase Sensing Wire Upgrade Power Zone® 410 Kit (120-240 V Switches)
G0074120	Phase Sense Kit, 240-480 V, PZ410	3-Phase Sensing Wire Upgrade Power Zone® 410 Kit (240-480 V Switches)

REFERENCE OWNERS MANUAL
FOR PERIODIC REPLACEMENT
PART LISTINGS.



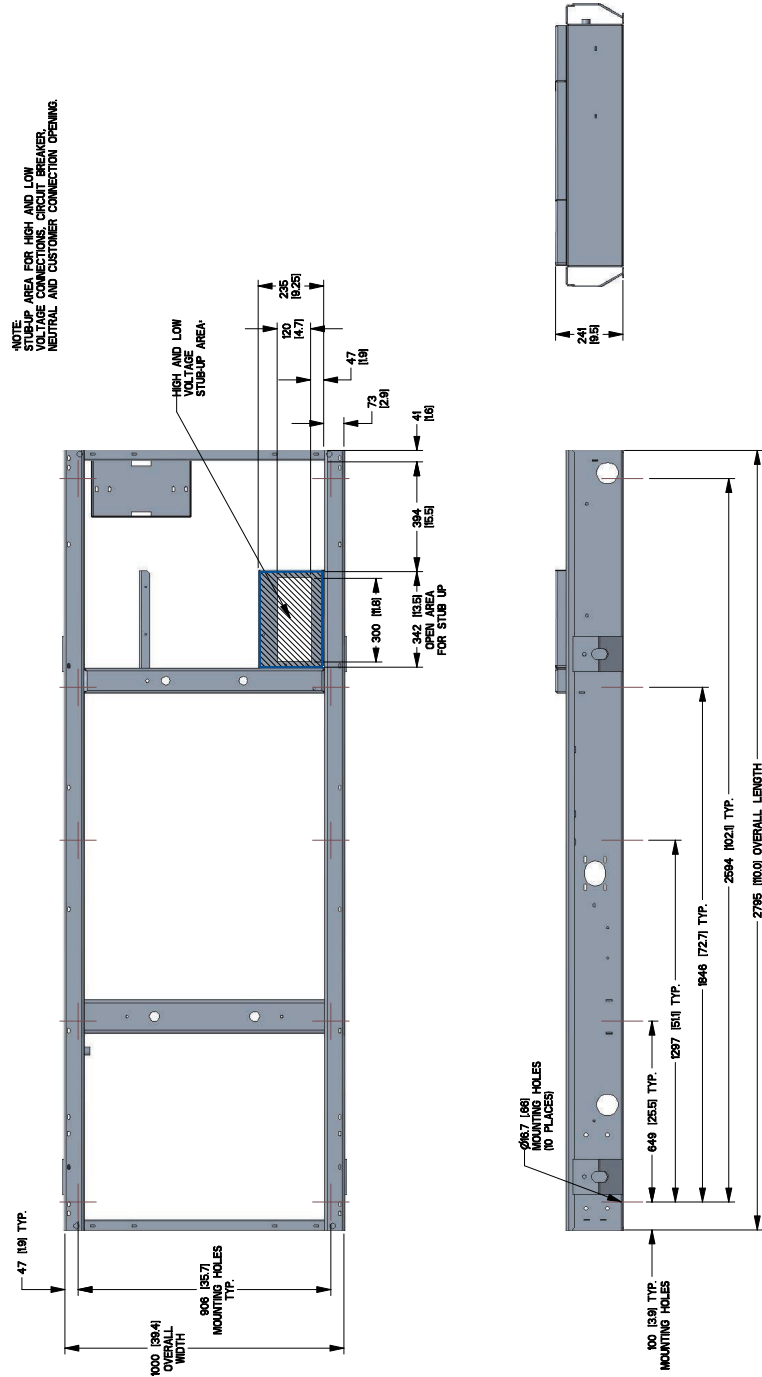
1. MINIMUM RECOMMENDED CONCRETE PAD SIZE: 6" LARGER PER SIDE THAN FRAME
2. 130MS 65/1" WIDE 200 (227) LONG
3. SEE SPECIFICATION SHEET OR OWNERS MANUAL
4. INSIDE STUBUP AREA FOR C/L LOAD CONDUIT CONNECTION, NEUTRAL CONNECTION, BATTERY CHARGER 20 VOLT AC (15 AMP MAX) CONNECTION AND ACCESS TO TRANSFER SWITCH CONTROL WIRES. REMOVE REAR COVER FOR ACCESS
5. SWITCH OF GENERATOR MUST BE LOCKED TO PREVENT FUEL INTRUSION AND RECIRCULATION OF DISCHARGE AIR AND/OR IMPROPER COOLING AIR FLOW
6. REFERENCE OWNERS MANUAL FOR MOUNTING SURFACE SHALL BE 5/8"1 GRADE 5
7. MUST ALLOW FREE FLOW OF INTAKE AIR, DISCHARGE AIR AND EXHAUST. SEE SPEC SHEET FOR MINIMUM AIR FLOW AND MAXIMUM RESTRICTION REQUIREMENTS.
8. GENERATOR MUST BE INSTALLED SUCH THAT FRESH COOLING AIR IS AVAILABLE TO THE DISCHARGE AIR EXHAUST. DISCHARGE AIR MUST BE REJECTED AWAY FROM EXHAUST PANEL. EXHAUST PANEL MUST BE INSTALLED TO PREVENT EXHAUST FROM ENTERING THROUGH DOORS TO FAN BELL



WEIGHT DATA

130 kW

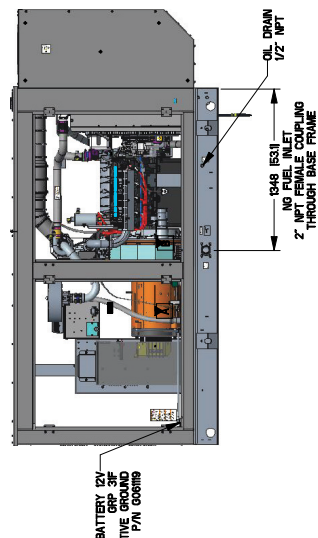
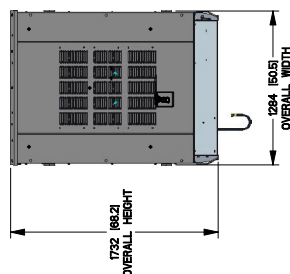
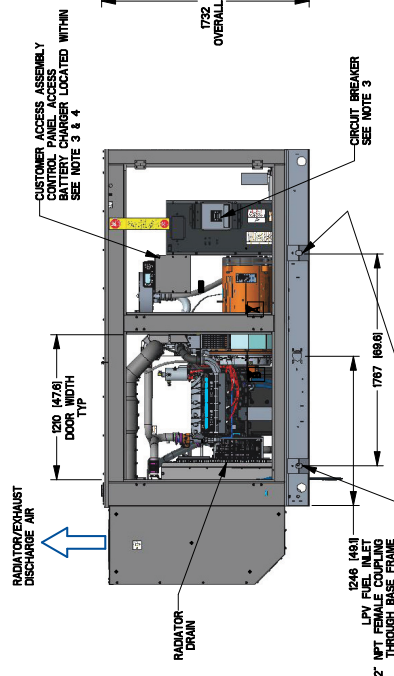
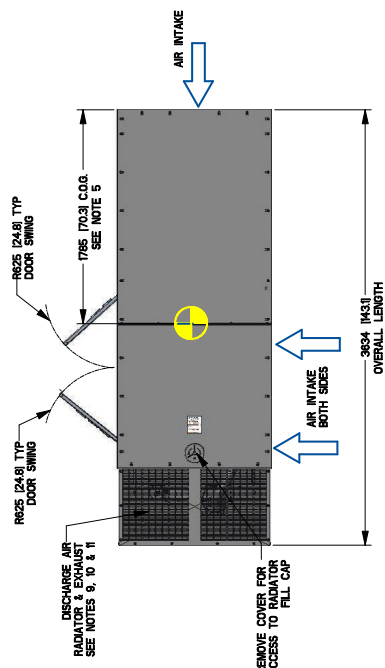
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Drawing #A0001618957 (1 of 2)

SERVICE ITEM	Q/L
OIL FILL CAP	EITHER SIDE
OIL DIP STICK	RIGHT SIDE
OIL FILTER	LEFT SIDE
OIL DRAIN HOSE	RIGHT SIDE
RADIATOR DRAIN HOSE	LEFT SIDE
COOLANT RECOVERY BOTTLE	RIGHT SIDE
RADIATOR FILL CAP	ROOF TOP
AIR CLEANER ELEMENT	EITHER SIDE
SPARK PLUGS	EITHER SIDE
MUFFLER	SEE NOTE 11
FAN BELT	EITHER SIDE
BATTERY	EITHER SIDE

REFERENCE OWNERS MANUAL
FOR PERIODIC REPLACEMENT
PART LISTINGS.



WEIGHT DATA				
ENGINE/KW	ENCLOSURE MATERIAL	WEIGHT GENSET ONLY KG (LBS)	WEIGHT SHIPPING SKID KG (LBS)	SHIPPING WEIGHT KG (LBS)
2000 HP/1500 KW	A1	4407 (9700)	541 (1200)	4848 (10700)

DIMENSIONS: MM [INCH]

NOTES:

- [illegible]

150 kW

Drawing #A0001618957 (2 of 2)

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