

**GENERAC®****RG  
Protector® Series****Protector® Series  
Standby Generators  
Liquid-Cooled Gaseous Engine****STANDARD FEATURES**

- Evolution™ Controller
- Padlockable Control Panel Cover
- Wi-Fi® & Ethernet Connectivity for Mobile Link® and Fleet
- Quiet Operation
- Corrosion Resistant Aluminum Enclosure
- 5 Year/2,000 Hour Limited Warranty
- High Motor-Starting & Surge Capacity
- ±1% Digital Voltage Regulation
- <5% Total Harmonic Distortion Power Quality
- Fuel Efficiency
- Model-Specific Fuel - Propane or Natural Gas
- EPA Emissions Certified
- CA & MA Exhaust Emissions Compliant
- UL 2200 Listed

**OPTIONAL FIELD-INSTALLABLE FEATURES**

Available as field-installable kits.

- Cellular Connectivity
- Push-Button Emergency Stop
- Cold Weather Operation Aids

**STANDBY POWER RATING**

Model RG10090 - 100 kW, 60 Hz Emergency Standby Power Generator



**QUIET-TEST™ Mobile Link™**

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.
- **MOBILE LINK® CONNECTIVITY:** Standard Wi-Fi and Ethernet connectivity included with every 22-100 kW RG generator. 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 provider for fast, friendly, and proactive service. With Mobile Link, users are taken care of before the next power outage.
- **TRUEPOWER™ ELECTRICAL TECHNOLOGY:** Superior harmonics and sine wave form produce less than 5% Total Harmonic Distortion for utility quality power. This allows confident operation of sensitive electronic equipment and micro-chip based appliances, such as variable speed HVAC systems.
- **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 service 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.

## Generator Specifications

## GENERATOR OUTPUT

Voltage	PROPANE		NATURAL GAS	
	Power (kW)	Current (A)	Power (kW)	Current (A)
120/240 V 1-Phase	96	400	96	400
208/120 V 3-Phase	100	347	96	333
240/120 V 3-Phase	100	300	96	288
480/277 V 3-Phase	100	150	96	144

Emergency Standby Power (ESP) Rating: Standby ratings apply to installations served by a reliable utility source. The ESP rating is applicable to varying loads for the duration of a power outage. The average power output over 24 hours shall not exceed 70% of the ESP rating.

## ALTERNATOR SYSTEM

Circuit Breaker (CB) Size (A)	120/240 V 1-Phase	400
	208/120 V 3-Phase	400
	240/120 V 3-Phase	350
	480/277 V 3-Phase	175
Alternator Type		Synchronous
Rotor Insulation Class		H
Stator Insulation Class		H
Telephone Interference Factor (TIF)		<50
Bearings		Sealed Ball
Coupling		Flexible Disc
Excitation System		Synchronous Brushless
Total Harmonic Distortion		<5%

## VOLTAGE REGULATION

Type	Digital
Sensing	All Phases
Regulation	±1%

## SURGE CAPACITY

Surge Amps at <0.4 Power Factor	30% Voltage Dip (A)
120/240 V 1-Phase	854
208/120 V 3-Phase	430
240/120 V 3-Phase	372
480/277 V 3-Phase	244

## ENGINE SYSTEM

Make	Generac
Model	9 L, V-type 8-Cylinder, Naturally Aspirated
Compression Ratio	9.9:1
Lifter Type	Hydraulic
Oil Pump Type	Gear
Oil Filter Type	Full Flow Spin-on Cartridge
Crankcase Capacity (qt (L))	10.5 (9.9)
Temperature Derate	3.3% per 10 °F above 77 °F (3% per 5 °C above 25 °C)
Altitude Derate	3% per 1,000 ft above 600 ft (1% per 100 m above 183 m)
Exercise Speed (rpm)	1,500
Operating Speed (rpm)	1,800

## GOVERNOR

Type	Electronic
Frequency Regulation	Isochronous
Steady State Regulation	±0.25%

## COOLING SYSTEM

Coolant	50/50 (50% Ethylene Glycol)
Coolant System Capacity (US gal (L))	5.5 (20.8)
Water Pump Type	Belt Driven
Fan Type	Belt Driven
Fan Quantity	1
Exhaust Flow at Rated Output (cfm (m <sup>3</sup> /min))	771 (21.8)
Maximum Ambient Air Temperature (°F (°C))	122 (50)

## FUEL SYSTEM

Usable Fuels	Liquid Propane (LP) Vapor or Natural Gas (NG)
Fuel Type Configuration	Model-Specific, Not Selectable
LP Vapor Pressure (in H <sub>2</sub> O (kPa))	11-14 (2.74-3.48)
NG Pressure (in H <sub>2</sub> O (kPa))	11-14 (2.74-3.48)
Fuel Shutoff Solenoid	Standard

**FUEL CONSUMPTION**

Rated Load	LIQUID PROPANE		NATURAL GAS	
	(US gph)	(L/h)	(cfh)	(m <sup>3</sup> /h)
25%	4.6	17.3	393	11.1
50%	7.0	26.4	600	17.0
75%	9.9	37.4	854	24.2
100%	13.3	50.5	1,154	32.7

Propane - 91,452 BTU/US gal (25.5 MJ/L); 36 ft<sup>3</sup>/US gal (0.27 m<sup>3</sup>/L); 2,516 BTU/ft<sup>3</sup> (93.7 MJ/m<sup>3</sup>); 4.24 lb/US gal (0.508 kg/L)  
 Natural Gas - 1,036 BTU/ft<sup>3</sup> (37.3 MJ/m<sup>3</sup>)  
 See emissions data sheets for maximum fuel flow for EPA and SCAQMD permitting purposes

**ELECTRICAL SYSTEM**

System Voltage (V)	12
Charge Alternator (A)	35
Battery Charger (A)	2.5
Recommended Battery (included)	Group 31, 925 CCA Minimum

**ENCLOSURE**

Sound Level at Operating Speed & No Load (dB(A) @ 23 ft (7 m))	71
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**CONTROLLER FEATURES**

Two-Line Plain Text LCD	Simple user interface for ease of operation.
Multi-Lingual	English, French, Spanish, and Portuguese
Mode Switch: AUTO	Automatic Start on Utility failure. 7 day exerciser.
OFF	Stops unit. Power is removed. Control and charger still operate.
MANUAL	Start with starter control, unit stays on. If utility fails, transfer to load takes place.
Programmable Start Delay Between 10 – 30 Seconds	Standard 10 sec
Engine Start Sequence	Cyclic cranking: 16 sec on, 7 rest (90 sec maximum duration)
Engine Warm-up	5 sec
Engine Cool-Down	1 min
Starter Lock-out	Starter cannot re-engage until 5 sec after engine has stopped.
Smart Battery Charger	Standard
Automatic Voltage Regulation with Over and Under Voltage Protection	Standard
Automatic Low Oil Pressure Shutdown	Standard
Overspeed Shutdown	Standard, 72 Hz
High Temperature Shutdown	Standard
Overcrank Protection	Standard
Safety Fused	Standard
Failure to Transfer Protection	Standard
Low Battery Protection	Standard
50 Event Run Log	Standard
Future Set Capable Exerciser	Standard
Incorrect Wiring Protection	Standard
Internal Fault Protection	Standard
Common External Fault Capability	Standard
Governor Failure Protection	Standard

**Available Accessories**

PRODUCT	PART NUMBER	DESCRIPTION
<b>Control System Kits</b>		
Mobile Link® Cellular 4G LTE Accessory Kit	G0072080	The Cellular Accessory Kit provides a cellular connection for monitoring of the generator using Mobile Link and Fleet; replaces Wi-Fi & Ethernet connectivity device; works with QT and RG 25-100 kW generator models.
Enclosure Mounted Emergency Stop Kit	G0065100	Emergency Stop consisting of a red push button switch; mounted to the exterior of the generator enclosure; replaces the Generator Emergency shutdown rocker switch in the same location.
Generac Load Manager, 50 A	G0070001	50 A helps optimize the performance of the standby generator by managing large electrical loads upLoad Manager on startup and shed them to aid in recovery when overloaded.
Generac Load Manager, 100 A	G0070061	100 A Load Manager helps optimize the performance of the standby generator by managing large electrical loads upon startup and shed them to aid in recovery when overloaded.
Generac LTE Propane Tank Fuel Level Monitor	G0070090	The Propane Tank Fuel Level Monitor connects to 4G LTE cellular service to measure and report the amount of LP fuel remaining in the tank. The app alerts the user of both remaining LP fuel and usage reports, offering the ultimate peace of mind.
<b>Operating Environment Kits</b>		
Battery Heater Kit	G0098830	Recommended for operating environments where the temperature drops below 32 °F (0 °C); externally powered by 120 VAC, 60 Hz.
Engine Block Heater Kit	G0098840	Recommended for operating environments where the temperature drops below 0 °F (-18 °C); externally powered by 120 VAC, 60 Hz.
<b>Installation Kits</b>		
Base Plug Kit	G0056510	Base plugs to fit in the lifting holes of the baseframe to keep debris out.
<b>Maintenance Kits</b>		
9 L Gaseous Engine Regular Maintenance Kit	G0098820	Regular maintenance kit includes oil filter, oil funnel, air filter, and spark plugs.
Bisque Paint Kit	G0057030	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.

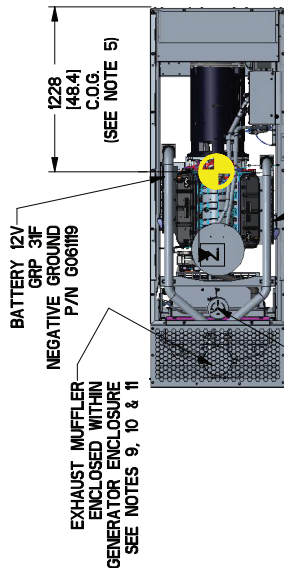
100 KW

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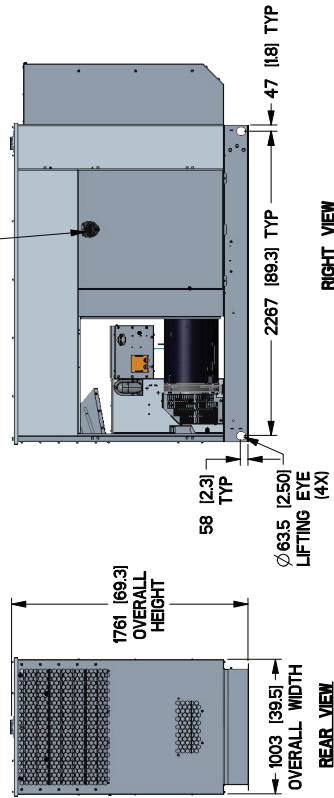
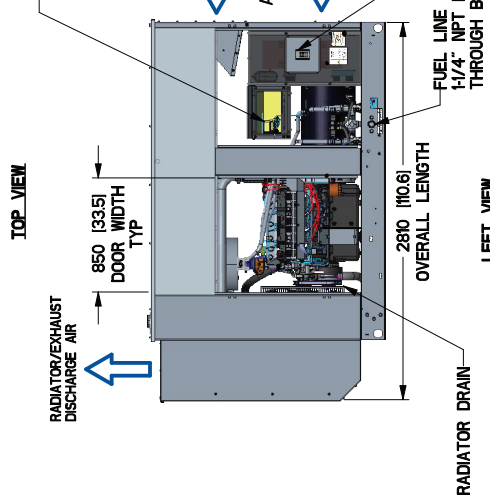
- NOTES:**
1. MINIMUM RECOMMENDED CONCRETE PAD SIZE: 6" LARGER PER SIDE THAN FRAME (269 (107) WIDE (847 (331) LONG). SEE SPECIFICATION GUIDE SUPPLIED WITH UNIT FOR CONCRETE PAD GUIDELINES.
  2. ALLOW SUFFICIENT ROOM ON ALL SIDES OF THE GENERATOR FOR MAINTENANCE AND SERVICING. THIS UNIT MUST BE INSTALLED IN ACCORDANCE WITH CURRENT APPLICABLE NFPA 37 AND NFPA 70 STANDARDS AS WELL AS ANY OTHER FEDERAL, STATE, AND LOCAL CODES.
  3. CONTROL PANEL / CIRCUIT BREAKER INFORMATION:
    - SEE SPECIFICATION SHEET OR OWNERS MANUAL
    - ACCESSIBLE THROUGH CUSTOMER ACCESS ASSEMBLY ON REAR OF GENERATOR.
  4. INSIDE STUB-UP AREA FOR AC LOAD LEAD CONDUIT CONNECTION, NEUTRAL CONNECTION, BATTERY CHARGER 120 VOLT AC IS AMP MAXI CONNECTION AND ACCESS TO TRANSFER SWITCH CONTROL WIRES REMOVE REAR COVER FOR ACCESS.
  5. CENTER OF GRAVITY AND WEIGHT MAY CHANGE DUE TO UNIT OPTIONS.
  6. BOTTOM OF GENERATOR SET MUST BE ENCLOSED TO PREVENT PEST INTRUSION AND RECIRCULATION OF DISCHARGE AIR AND/OR IMPROPER COOLING AIR FLOW.
  7. REFERENCE OWNERS MANUAL FOR LIFTING WARNINGS.
  8. MOUNTING BOLTS OR STUDS TO MOUNTING SURFACE SHALL BE 5/8" H GRADE 5.
  9. MUST ALLOW FREE FLOW OF INTAKE AIR, DISCHARGE AIR, AND EXHAUST. SEE SPECIFICATION SHEET FOR MINIMUM AIR FLOW AND MAXIMUM RESTRICTION REQUIREMENTS.
  10. GENERATOR MUST BE INSTALLED SUCH THAT FRESH COOLING AIR IS AVAILABLE AND THAT DISCHARGE AIR FROM RADIATOR IS NOT RECIRCULATED.
  11. REMOVE FRONT END PANEL TO ACCESS EXHAUST MUFFLER. ACCESS AVAILABLE THROUGH DOORS TO FAN BELT.

SERVICE ITEM	9.0L
OIL FILL CAP	EITHER SIDE
OIL DIP STICK	RIGHT SIDE
OIL FILTER	LEFT SIDE
OIL DRAIN HOSE	LEFT 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	RIGHT SIDE

REFERENCE OWNERS MANUAL FOR PERIODIC REPLACEMENT PART LISTINGS.



CUSTOMER ACCESS ASSEMBLY, CONTROL BATTERY CHARGER LOCATED WITHIN SEE NOTE 3 & 4



ENGINE/KW	ENCLOSURE MATERIAL	WEIGHT DATA	
		WEIGHT GENSET ONLY KG (LBS)	WEIGHT SHIPPING SKID KG (LBS)
9.0L/100KW	AL	1292 (2848)	1371 (3024)

DIMENSIONS: MM (INCH)

**100 KW**

Drawing #A0001453011 (2 of 2)

\*NOTE: STUB-UP AREA FOR HIGH AND LOW VOLTAGE CONNECTIONS, CIRCUIT BREAKER NEUTRAL AND CUSTOMER CONNECTION OPENING.

