Protector® QS Series

GENERAC®

PROTECTOR® QS SERIES

Standby Generators

Liquid-Cooled Gaseous Engine

INCLUDES:

- Two-Line LCD Multilingual Digital Evolution™ Controller (English/Spanish/French/Portuguese) with external viewing window for easy indication of generator status and breaker position.
- True Power™ Electrical Technology
- Isochronous Electronic Governor
- Sound Attenuated Enclosure
- Closed Coolant Recovery System
- Smart Battery Charger
- UV/Ozone Resistant Hoses
- ±1% Voltage Regulation
- Natural Gas or LP Operation
- 3 Year Limited Warranty

Standby Power Rating

Model RG032 (Aluminum - Bisque) - 32 kW 60 Hz
Model RG038 (Aluminum - Bisque) - 38 kW 60 Hz

Not for sale in US and Canada

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, 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**

- **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. Digital voltage regulation at ±1%.

- **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

Type	Synchronous
Rotor Insulation Class	F (32 & 38 kW)
Stator Insulation Class	H
Telephone Interference Factor (TIF)	<50
Alternator Output Leads 1-Phase	4 wire
Alternator Output Leads 3-Phase	6 wire
Bearings	Sealed Ball
Coupling	Flexible Disc
Excitation System	Direct

VOLTAGE REGULATION

Type	Electronic
Sensing	Single Phase
Regulation	± 1%

GOVERNOR SPECIFICATIONS

Type	Electronic
Frequency Regulation	Isochronous
Steady State Regulation	± 0.25%

ELECTRICAL SYSTEM

Battery Charge Alternator	12 Volt 30 Amp
Static Battery Charger	2.5 Amp
Recommended Battery (battery not included)	Group 26 (32 & 38 kW)
System Voltage	12 Volts

GENERATOR FEATURES

Revolving field heavy duty generator
Directly connected to the engine
Operating temperature rise 120 °C above a 40 °C ambient
Class H insulation is NEMA rated
Class F 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.

ENGINE SPECIFICATIONS: 32 & 38 kW

Make	Generac
Model	In-line
Cylinders	4
Displacement (Liters)	2.4
Bore (in/mm)	3.41 / 86.5
Stroke (in/mm)	3.94 / 100
Compression Ratio	9.5:1
Intake Air System	Turbocharged / Aftercooled (32 & 38 kW)
Lifter Type	Hydraulic

ENGINE LUBRICATION SYSTEM

Oil Pump Type	Gear
Oil Filter Type	Full flow spin-on cartridge
Crankcase Capacity (qt/l)	4 / 3.8 (32 & 38 kW)

ENGINE COOLING SYSTEM

Type	Closed
Water Pump	Belt driven
Fan Speed (rpm)	1,500 - 32 & 38 kW
Fan Diameter (in/mm)	22 / 558.8 (32 & 38 kW)
Fan Mode	Puller (32 & 38 kW)

FUEL SYSTEM

Usable Fuels	Liquid Propane (LP) Vapor & Natural Gas (NG)
Carburetor	Down Draft
Secondary Fuel Regulator	Standard
Fuel Shut Off Solenoid	Standard
LP Vapor Fuel Pressure	5-14 in. Water Column (1.24 - 3.48 kPa)
NG Fuel Pressure	5-14 in. Water Column (1.24 - 3.48 kPa)

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

GENERATOR OUTPUT VOLTAGE/kW - 60 Hz

		kW LPG	Amp LPG	kW Nat. Gas	Amp Nat. Gas	CB Size (Both)
RG032	120 / 240 V, 1Ø, 1.0 pf	32	133	32	133	150
	120 / 208 V, 3Ø, 0.8 pf	32	111	32	111	125
	120 / 240 V, 3Ø, 0.8 pf	32	96	32	96	100
	277 / 480 V, 3Ø, 0.8 pf	32	48	32	48	60
RG038	120 / 240 V, 1Ø, 1.0 pf	38	158	38	158	175
	120 / 208 V, 3Ø, 0.8 pf	38	132	38	132	150
	120 / 240 V, 3Ø, 0.8 pf	38	114	38	114	125
	277 / 480 V, 3Ø, 0.8 pf	38	57	38	57	60

SURGE CAPACITY IN AMPS

		Voltage Dip @ < .4 pf	
		15%	30%
RG032	120 / 240 V, 1Ø	75	180
	120 / 208 V, 3Ø	87	210
	120 / 240 V, 3Ø	75	182
	277 / 480 V, 3Ø	36	87
RG038	120 / 240 V, 1Ø	75	180
	120 / 208 V, 3Ø	87	210
	120 / 240 V, 3Ø	75	182
	277 / 480 V, 3Ø	36	87

ENGINE FUEL CONSUMPTION

		Natural Gas		Propane		
		(ft^3/hr)	(m^3/hr)	(gal/hr)	(ft^3/hr)	(l/hr)
RG032	Exercise cycle	79	2.2	0.8	30	3.2
	25% of rated load	144	4.1	1.7	60	6.3
	50% of rated load	226	6.4	2.7	97	10.3
	75% of rated load	298	6.4	3.7	132	13.9
	100% of rated load	375	10.6	4.6	166	17.5
RG038	Exercise cycle	83	2.3	0.9	31	3.2
	25% of rated load	162	4.6	1.7	62	6.6
	50% of rated load	255	7.2	2.9	103	10.8
	75% of rated load	345	9.8	4	142	15
	100% of rated load	437	12.4	5.2	185	19

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

For Btu content, multiply ft^3/hr x 2,520 (LP) or ft^3/hr x 1,000 (NG)

For megajoule content, multiply m^3/hr x 93.15 (LP) or m^3/hr x 37.26 (NG)

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.

GENERAC®

32 • 38

operating data

ENGINE COOLING

	32 & 38 kW
Air flow (inlet air including alternator and combustion air in cfm / cmm)	2,200 / 62.3
System coolant capacity (gal / liters)	2.5 / 9.5
Heat rejection to coolant (BTU per hr / MJ per hr)	145,000 / 153
Maximum operation air temperature on radiator (°F / °C)	140 / 60
Maximum ambient temperature (°F / °C)	122 / 50

COMBUSTION REQUIREMENTS

Flow at rated power (cfm / cmm)	106 / 3

SOUND EMISSIONS

Sound output in dB(A) at 23 ft (7 m) with generator in exercise mode*	58
Sound output in dB(A) at 23 ft (7 m) with generator operating at normal load*	64

EXHAUST

Exhaust flow at rated output (cfm / cmm)	300 / 8.5
Exhaust temperature at muffler outlet (°C / °F)	579 / 1,075

ENGINE PARAMETERS

Rated Synchronous rpm	1,800

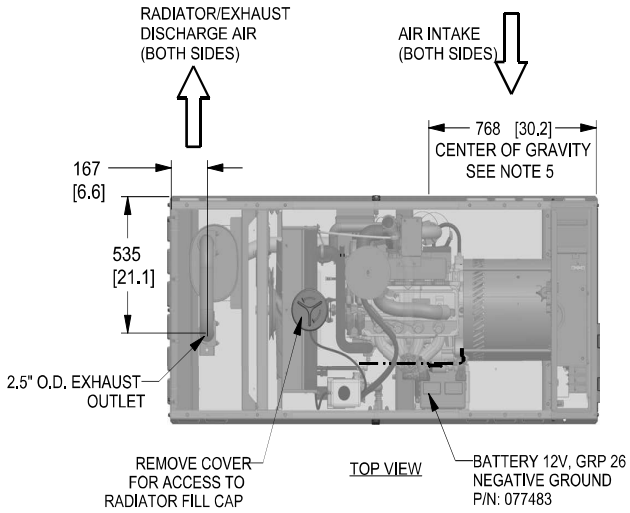
POWER ADJUSTMENT FOR AMBIENT CONDITIONS

Temperature Deration ..... 3% for every 10 °C above 25 °C or 1.65% for every 10 °F above 77 °F

Altitude Deration (32 & 38 kW) ..... 1% for every 100 m above 915 m or 3% for every 1,000 ft above 3,000 ft

CONTROLLER FEATURES

Two-Line Plain Text LCD Display ..... Simple user interface for ease of operation.
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 ..... 10 sec standard
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

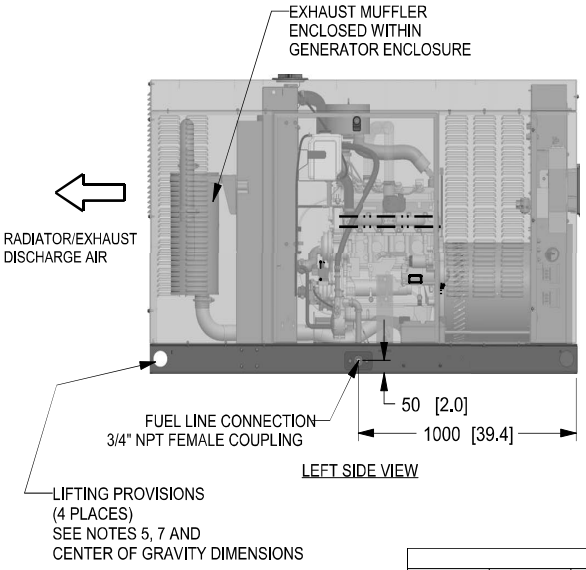


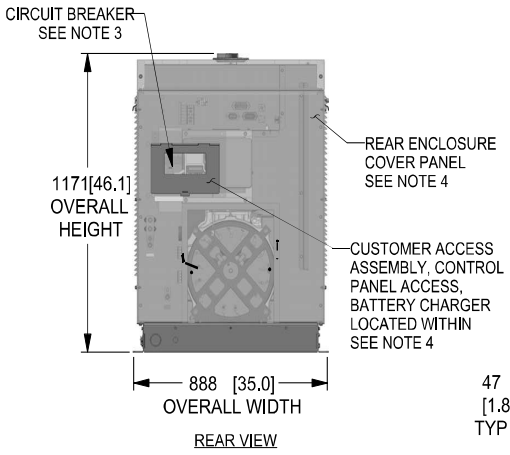
SERVICE ITEM	2.4L
OIL FILL CAP	EITHER SIDE
OIL DIP STICK	RIGHT SIDE
OIL FILTER	RIGHT SIDE
OIL DRAIN HOSE	RIGHT SIDE
RADIATOR DRAIN HOSE	LEFT SIDE
COOLANT RECOVERY BOTTLE	LEFT SIDE
RADIATOR FILL CAP ACCESS	ROOF TOP
AIR CLEANER ELEMENT	RIGHT SIDE
SPARK PLUGS	LEFT SIDE
MUFFLER	SEE NOTE 11
DRIVE BELT	EITHER SIDE
FAN BELT	SEE NOTE 11
BATTERY	LEFT SIDE

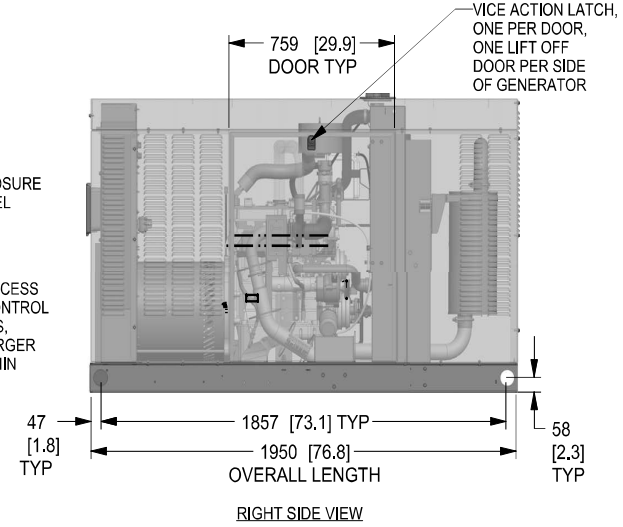
REFERENCE OWNERS MANUAL FOR PERIODIC REPLACEMENT PART LISTINGS.

NOTES:

1. MINIMUM RECOMMENDED CONCRETE PAD SIZE: 1194 (47") WIDE X 2255 (88,8") LONG. REFERENCE INSTALLATION 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 DOOR ON REAR OF GENERATOR.
4. REMOVE THE REAR ENCLOSURE COVER PANEL TO ACCESS THE STUB-UP AREAS AS FOLLOWS:
   - HIGH VOLTAGE CONNECTION INCLUDING AC LOAD LEAD CONDUIT CONNECTION, NEUTRAL CONNECTION, AND BATTERY CHARGER 120 VOLT AC (0.5 AMP MAX) CONNECTION.
   - LOW VOLTAGE CONNECTION INCLUDING TRANSFER SWITCH CONTROL WIRES.
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 5/8-11 GRADE 5 (USE STANDARD SAE TORQUE SPECS)
9. MUST ALLOW FREE FLOW OF INTAKE AIR, DISCHARGE AIR AND EXHAUST. SEE SPEC 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. EXHAUST MUFFLER AND FAN BELT ARE ENCLOSED WITHIN GENERATOR ENCLOSURE, REMOVE FRONT PANEL TO ACCESS.







WEIGHT DATA				
ENGINE/KW	ENCLOSURE MATERIAL	WEIGHT GENSET ONLY KG [LBS]	WEIGHT SHIPPING SKID KG [LBS]	SHIPPING WEIGHT KG [LBS]
2.4L 32KW	AL	556 [1225]	44 [98]	600 [1323]
2.4L 38KW	AL	560 [1235]	44 [98]	605 [1333]

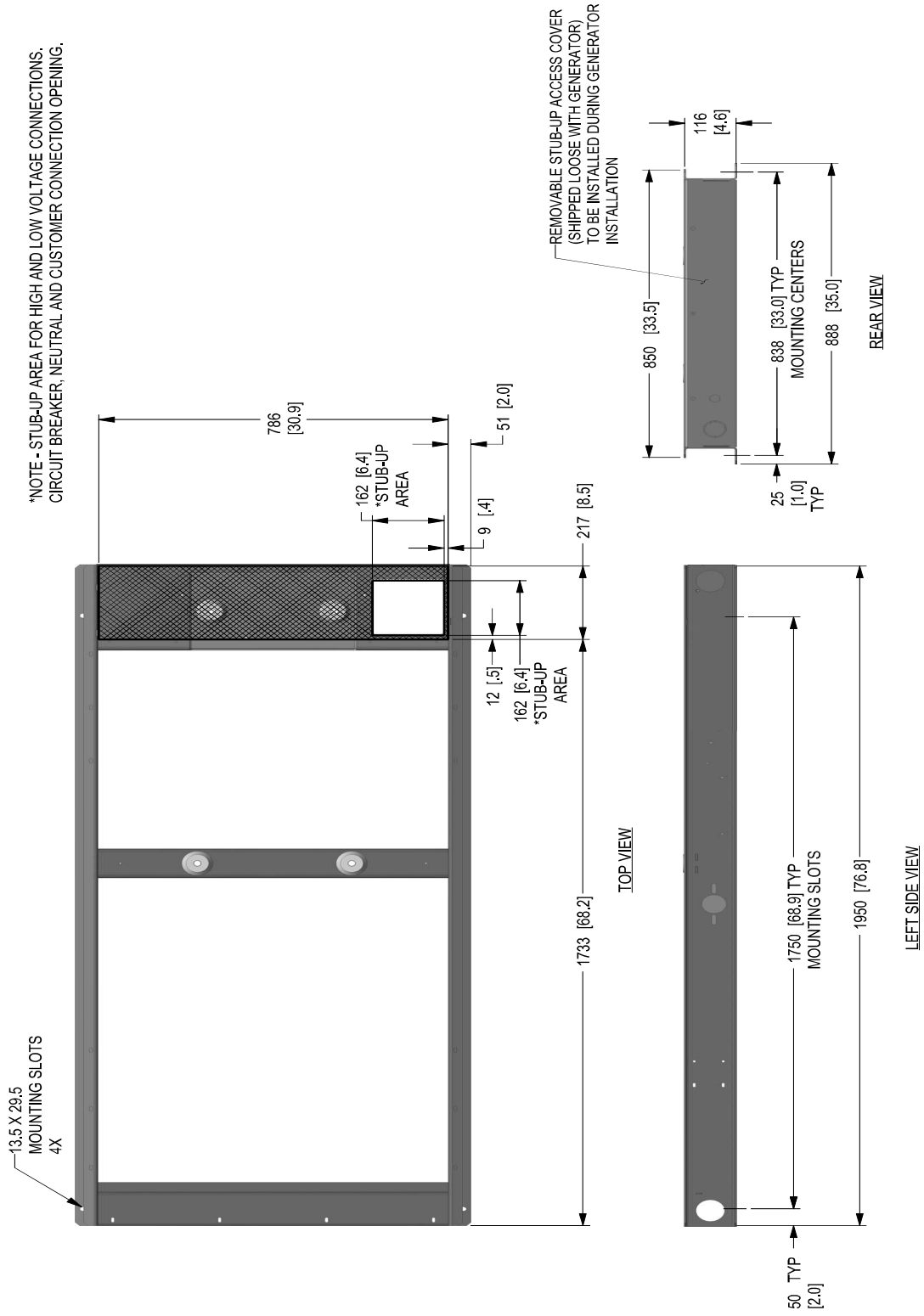
DIMENSIONS: MM [INCH]

32 & 38 kW

GENERAC®

installation layout

Drawing #0K9268-B (2 of 2)



GENERAC®
Generac México S.A. de C.V.
Lago Alberto No.319 Piso 17
Col. Granada, Miguel Hidalgo, CDMX, CP11520
Tels. 52 55 5624 5600