

# 60 kW

## Liquid Cooled Gas Engine Generator Sets

Standby Power Rating  
60 kW 60 Hz

Model Number: 05649



### GENERAC 2.4L ENGINE

Turbocharged/Aftercooled  
Gaseous Fueled

## STANDARD EQUIPMENT

- All input connections in one single area
- High coolant temperature shutdown
- Low oil pressure shutdown
- Low coolant level automatic shutdown
- Overspeed automatic shutdown
- Crank timer
- Exercise timer
- Oil drain extension
- Cool flow radiator
- Closed coolant recovery system
- UV/Ozone resistant hoses
- Watertight state of the art electrical connectors
- Mainline circuit breaker
- Radiator drain extension
- Battery charge alternator
- 2 Amp static battery charger
- Battery and battery cables
- Battery rack
- Fan and belt guards
- Isochronous governor
- Flex fuel line
- Hour meter

## FEATURES

- Innovative design and fully prototype tested
- UL2200 Listed
- Solid state frequency compensated voltage regulator
- Dynamic and static battery charger
- Sound attenuated acoustically designed enclosure
- Quiet test for low noise level exercise
- Acoustically designed engine cooling system
- High flow low noise factory engineered exhaust system
- State of the art digital control system with R100 digital control panel
- Watertight electrical connectors
- Rodent proof construction
- High efficiency, low distortion Generac designed alternator
- Vibration isolated from mounting base
- Matching Generac transfer switches engineered and tested to work as a system
- All components easily accessible for maintenance
- Electrostatically applied powder paint



# APPLICATION & ENGINEERING DATA

60 kW

## GENERATOR SPECIFICATIONS

TYPE .....	Synchronous
ROTOR INSULATION.....	Class H
STATOR INSULATION.....	Class H
TOTAL HARMONIC DISTORTION.....	<5%
TELEPHONE INTERFERENCE FACTOR (TIF) .....	<50
ALTERNATOR OUTPUT LEADS 3 PHASE .....	4 wire
BEARINGS.....	Sealed Ball
COUPLING.....	Flexible Disc
LOAD CAPACITY (STANDBY RATING).....	60 kW
EXCITATION SYSTEM.....	Direct

**NOTE:** Generator rating and performance in accordance with ISO8528-5, BS5514, SAE J1349, ISO3046, and DIN6271 standards.

## VOLTAGE REGULATOR

TYPE .....	Electronic
SENSING .....	Single Phase
REGULATION.....	± 1%
FEATURES.....	V/F Adjustable Adjustable Voltage and Gain LED Indicators

## GENERATOR FEATURES

- Revolving field heavy duty generator
- Directly connected to the engine
- Operating temperature rise 120 °C above a 40 °C ambient
- Insulation is Class H rated at 150 °C rise
- All models are fully prototyped tested

## CONTROL PANEL FEATURES

- |  |  |
|--|--|
| <input type="checkbox"/> SEVEN LED INDICATOR LIGHTS <ul style="list-style-type: none"><li>• System ready</li><li>• Low fuel pressure</li><li>• Low battery</li><li>• Low oil pressure</li><li>• High coolant temp/low coolant temp</li><li>• Overspeed</li><li>• Overcrank</li></ul> | <input type="checkbox"/> ADDITIONAL FUNCTIONS <ul style="list-style-type: none"><li>• Utility sensing</li><li>• Delay on utility failure for engine start</li><li>• Engine warm-up before transfer</li><li>• Delay to retransfer to utility</li><li>• Engine cooldown timer</li><li>• Exerciser not set</li><li>• Hour meter</li></ul> |
|--|--|
- INTERNAL FUNCTIONS:
- 3 position switch (auto, off and manual)
  - 2 wire start for any transfer switch
  - Communicates with the Generac RTS transfer switch
  - Built-in 7 day exerciser
  - Selectable engine speed at exercise
  - Governor controller is built into the master control board
  - Temperature range -40 °C to 70 °C

## ENGINE SPECIFICATIONS

MAKE .....	Generac
MODEL.....	2.4 Liter
CYLINDERS.....	Inline 4
DISPLACEMENT.....	2.4 Liter
BORE.....	3.41
STROKE.....	3.94
COMPRESSION RATIO.....	8.5:1
INTAKE AIR SYSTEM.....	Turbocharged/Aftercooled
VALVE SEATS.....	Hardened
LIFTER TYPE.....	Hydraulic

## GOVERNOR SPECIFICATIONS

TYPE .....	Electronic
FREQUENCY REGULATION.....	± Isochronous
STEADY STATE REGULATION.....	± 0.25%
ADJUSTMENTS FOR:	
Speed .....	Yes
Droop.....	Yes

## ENGINE LUBRICATION SYSTEM

OIL PUMP .....	Gear
OIL FILTER.....	Full flow spin-on cartridge
CRANKCASE CAPACITY.....	4 Quarts

## ENGINE COOLING SYSTEM

TYPE .....	Closed
WATER PUMP.....	Belt driven
FAN SPEED.....	2100
FAN DIAMETER.....	22 inches
FAN MODE.....	Puller

## FUEL SYSTEM

FUEL TYPE.....	Natural gas, propane vapor
CARBURETOR.....	Down Draft
SECONDARY FUEL REGULATOR.....	Standard
FUEL SHUT OFF SOLENOID .....	Standard
OPERATING FUEL PRESSURE.....	5" - 14" H <sub>2</sub> O

## ELECTRICAL SYSTEM

BATTERY CHARGE ALTERNATOR.....	12V 30 Amp
STATIC BATTERY CHARGER .....	2 Amp
RECOMMENDED BATTERY .....	Group 24F, 525CCA
SYSTEM VOLTAGE.....	12 Volts

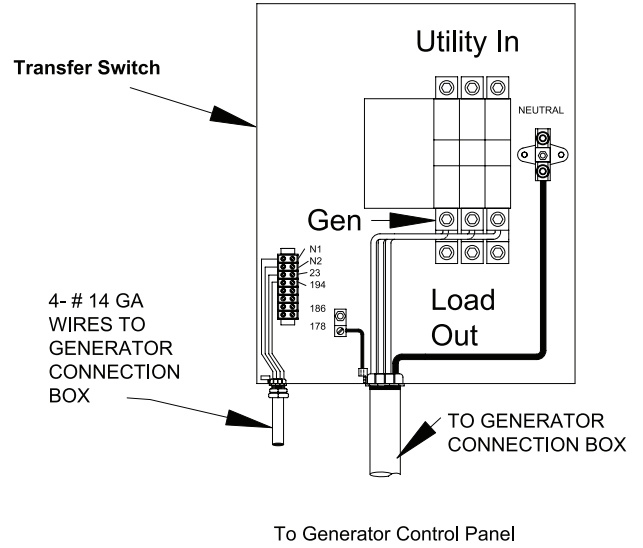
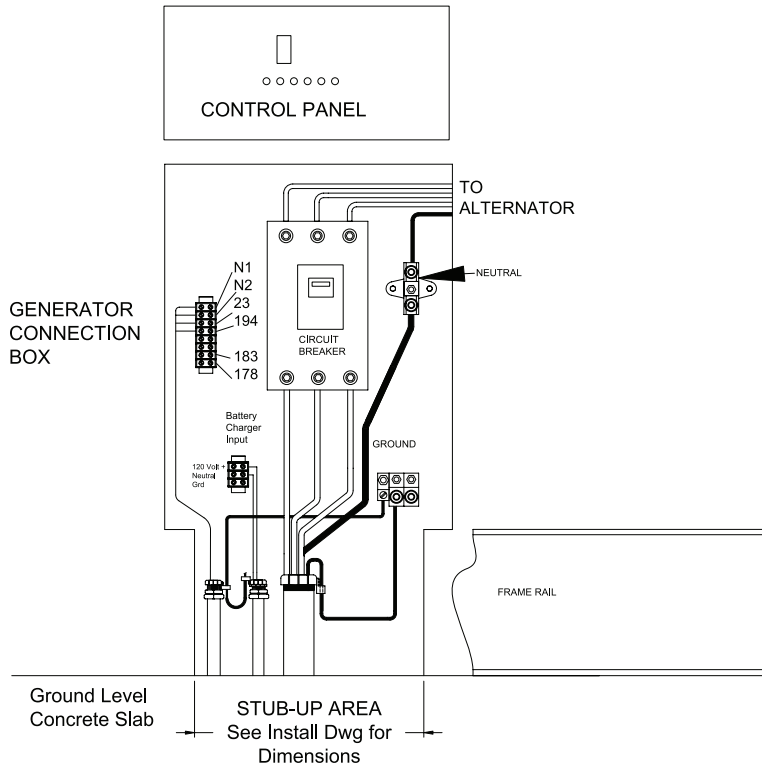
## OPERATING DATA

<b>KW RATING</b>	60		
<b>ENGINE SIZE</b>	2.4 Liter		
<b>GENERATOR OUTPUT VOLTAGE/KW - 60Hz</b>	<b>KW</b>	<b>AMP</b>	<b>CB Size</b>
120/240V, 1-phase, 1.0 pf	60	250	300
120/208V, 3-phase, 0.8 pf	60	208	250
120/240V, 3-phase, 0.8 pf	60	180	200
277/480V, 3-phase, 0.8 pf	60	90	100
<b>GENERATOR LOCKED ROTOR KVA AVAILABLE @ VOLTAGE DIP OF 35%</b>			
Single phase or 208/240 3-phase			120
480V 3-phase			141
<b>ENGINE FUEL CONSUMPTION (Natural Gas) (Propane)</b>	<b>Natural Gas</b>	<b>Propane</b>	
	(ft <sup>3</sup> /hr.)	(gal/hr.)	cu ft/hr
Exercise cycle	123	1.34	49.3
25% of rated load	267	2.7	101
50% of rated load	483	5.0	183
75% of rated load	672	7.0	255
100% of rated load	862	9.0	327
<b>ENGINE COOLING</b>			
Air flow (inlet air including alternator and combustion air)	ft <sup>3</sup> /min.	3,280	
System coolant capacity	US gal.	2.5	
Heat rejection to coolant	BTU/hr.	270,000	
Max. operating air temp. on radiator	°C (°F)	60 (150)	
Max. ambient temperature	°C (°F)	50 (140)	
<b>COMBUSTION AIR REQUIREMENTS</b>			
Flow at rated power 60 Hz	cfm	180	
<b>SOUND EMISSIONS IN DBA</b>			
Exercising at 7 meters	65		
Normal operation at 7 meters	72		
<b>EXHAUST</b>			
Exhaust flow at rated output 60 Hz	cfm	494	
Exhaust temp. at muffler outlet	°F	1,050	
<b>ENGINE PARAMETERS</b>			
Rated synchronous RPM	60 Hz	3600	
HP at rated KW	60 Hz	94	
<b>POWER ADJUSTMENT FOR AMBIENT CONDITIONS</b>			
Temperature Deration			
3% for every 10 °C above - °C	25		
1.65% for every 10 °F above - °F	77		
Altitude Deration			
1% for every 100 m above - m	915		
3% for every 1000 ft. above - ft.	3000		

RATING: All three phases units are rated at 0.8 power factor. All single phase units are rated at 1.0 power factor. 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.

# INTERCONNECTIONS

60 kW

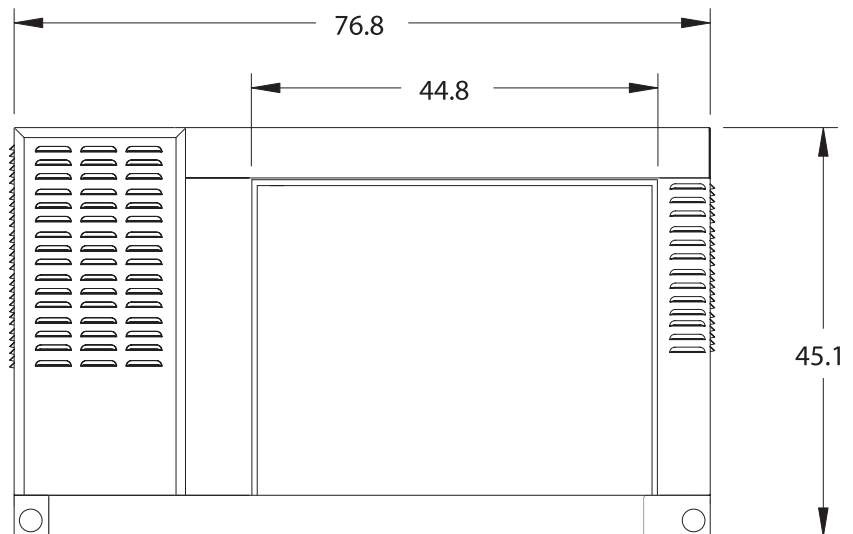
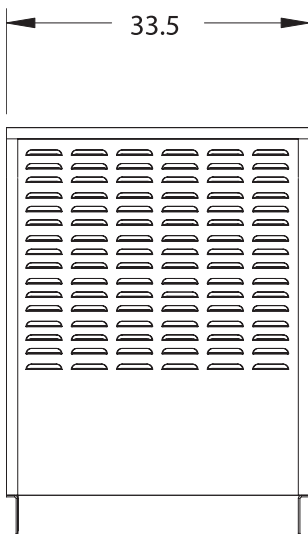


### CIRCUIT BREAKER SIZE

kW	VOLTS	/	AMPS	LUG SIZE
60	240	1 $\phi$	300	(2) 250 mcm to 2 - 1/0 or (1) 600 mcm to #4
60	208	3 $\phi$	250	(2) 250 mcm to 2 - 1/0 or (1) 600 mcm to #4
60	240	3 $\phi$	200	#6 to 300 mcm
60	480	3 $\phi$	100	#6 to 300 mcm

Installation Drawing Ref. No. 0F9577

# INSTALLATION LAYOUT



WEIGHT: TBA



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