

# Standby Power Rating

# 70 kW 60 Hz

## Liquid Cooled Gas Engine Generator Sets



**WHISPER-TEST™**

**Whisper-Test™**  
Low Speed Exercise  
61 dB(A) at 23 feet

**GENERAC 6.8L ENGINE**

Naturally Aspirated  
Gaseous Fueled

UL 2200 Listed

Transfer Switch is sold separately

## STANDARD EQUIPMENT

- All input connections in one single area
- High coolant temperature shutdown
- Low oil pressure shutdown
- Low coolant level automatic shutdown
- Low fuel pressure
- Overspeed automatic shutdown
- Adjustable cranking timer
- Adjustable 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
- Oil drain extension to frame rail
- Radiator drain extension
- Battery charge alternator
- 2 Amp static battery charger
- Battery, battery rack and battery cables
- Fan and belt guards
- Isochronous governor
- Flex fuel line pigtail

## FEATURES

- Innovative design and fully prototype tested
- UL 2200 Listed
- Solid state frequency compensated voltage regulator
- Dynamic and static battery charger
- Sound attenuated acoustically designed enclosure
- Whisper-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 H-100 microprocessor 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
- Built-in kW, kVAR and power factor meters

**GUARDIAN Elite™**  
by Generac Power Systems, Inc.

**COMMERCIAL SERIES**

## GENERATOR SPECIFICATIONS

TYPE.....	Synchronous
ROTOR INSULATION.....	Class H
STATOR INSULATION.....	Class H
TOTAL HARMONIC DISTORTION.....	<3.5%
TELEPHONE INTERFERENCE FACTOR (TIF).....	<50
ALTERNATOR OUTPUT LEADS 3 PHASE.....	4 wire
BEARINGS.....	Sealed Ball
COUPLING.....	Flexible Disc
LOAD CAPACITY (STANDBY RATING).....	70 kW
EXCITATION SYSTEM.....	Direct

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

## VOLTAGE REGULATOR

TYPE.....	Full Digital
SENSING.....	3 Phase
REGULATION.....	± 1/4%
FEATURES.....	Built into H-100 Control Panel V/F Adjustable Adjustable Voltage and Gain

## 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 prototype models have passed three phase short circuit testing

## CONTROL PANEL FEATURES

- TWO FOUR LINE LCD DISPLAYS READ:
  - Voltage (all phases)
  - Power factor
  - kVAR
  - Engine speed
  - Run hours
  - Fault history
  - Coolant temperature
  - Low oil pressure shutdown
  - Overvoltage
  - Low coolant level
  - Not in auto position (flashing light)
  - ATS selection
  - Current (all phases)
  - kW
  - Transfer switch status
  - Low fuel pressure
  - Service reminders
  - Oil pressure
  - Time and date
  - High coolant temperature shutdown
  - Overspeed
  - Low coolant level
  - Exercise speed
- INTERNAL FUNCTIONS:
  - I<sup>2</sup>T function for alternator protection from line to neutral and line to line short circuits
  - Emergency stop
  - Programmable auto crank function
  - 2 wire start for any transfer switch
  - Communicates with the Generac HTS transfer switch
  - Built-in 7 day exerciser
  - Adjustable engine speed at exerciser
  - RS232 port for GenLink® control
  - RS485 port remote communication
  - Canbus addressable
  - Governor controller and voltage regulator are built into the master control board
  - Temperature range -40 °C to 70 °C

## ENGINE SPECIFICATIONS

MAKE.....	Generac
MODEL.....	V Type
CYLINDERS.....	10
DISPLACEMENT.....	6.8 Liter
BORE.....	3.55
STROKE.....	4.17
COMPRESSION RATIO.....	9:1
INTAKE AIR SYSTEM.....	Naturally Aspirated
VALVE SEATS.....	Hardened
LIFTER TYPE.....	Hydraulic

## GOVERNOR SPECIFICATIONS

TYPE.....	Electronic
FREQUENCY REGULATION.....	Isochronous
STEADY STATE REGULATION.....	± 0.25%
All functions are factory preset	
Individual parameter adjustments can be made via GenLink®	

## ENGINE LUBRICATION SYSTEM

OIL PUMP.....	Gear
OIL FILTER.....	Full flow spin-on cartridge
CRANKCASE CAPACITY.....	5 Quarts

## ENGINE COOLING SYSTEM

TYPE.....	Closed
WATER PUMP.....	Belt driven
FAN SPEED.....	2030
FAN DIAMETER.....	22 inches
FAN MODE.....	Pusher

## FUEL SYSTEM

FUEL TYPE.....	Natural gas, propane vapor
CARBURETOR.....	Down Draft
SECONDARY FUEL REGULATOR.....	Standard
FUEL SHUT OFF SOLENOID.....	Standard
OPERATING FUEL PRESSURE.....	11" - 14" H <sub>2</sub> O

## ELECTRICAL SYSTEM

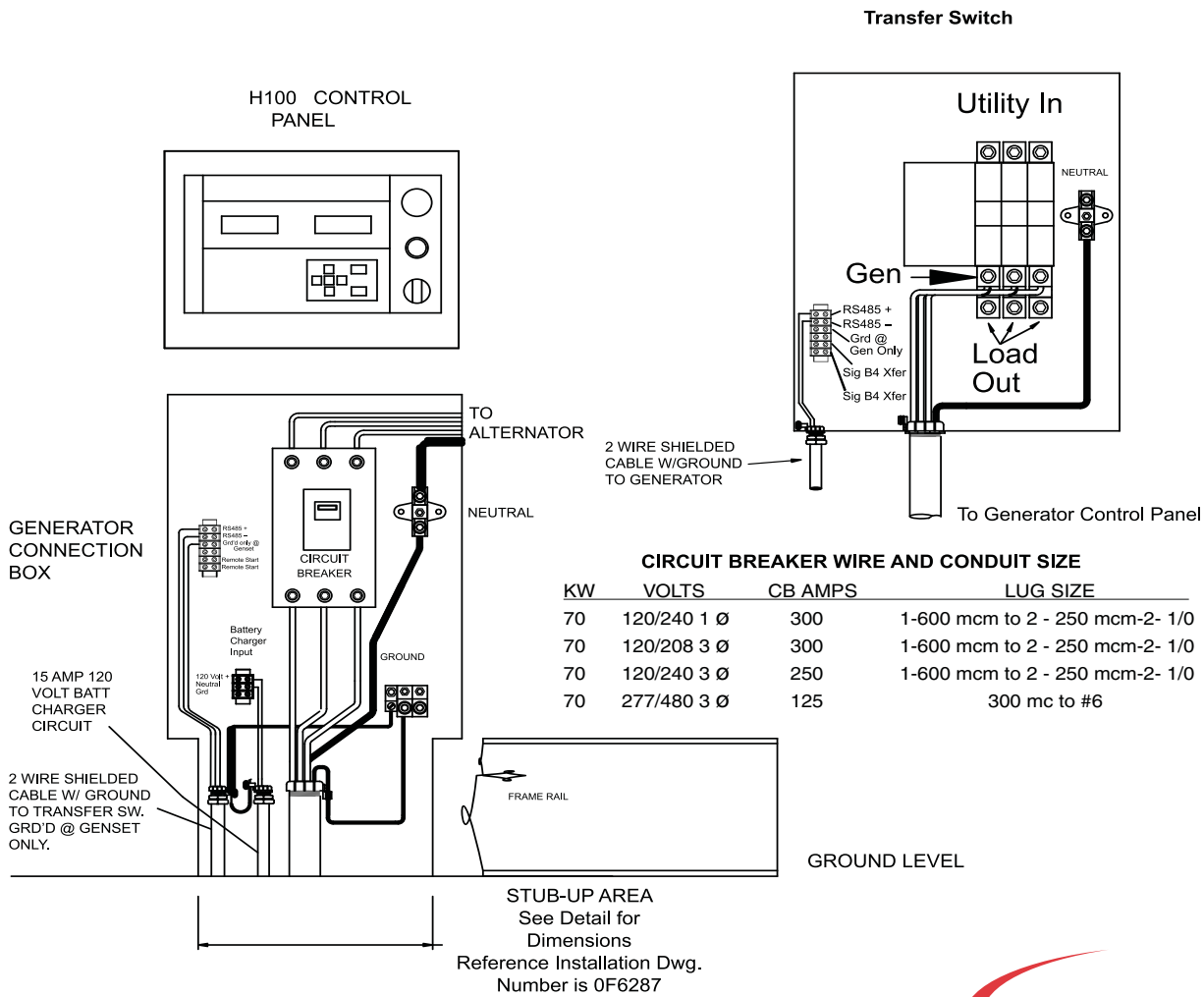
BATTERY CHARGE ALTERNATOR.....	12V 30 Amp
STATIC BATTERY CHARGER.....	12V 2 Amp
RECOMMENDED BATTERY.....	Group 24F, 525CCA
SYSTEM VOLTAGE.....	12 Volts

COMMERCIAL 70 kW

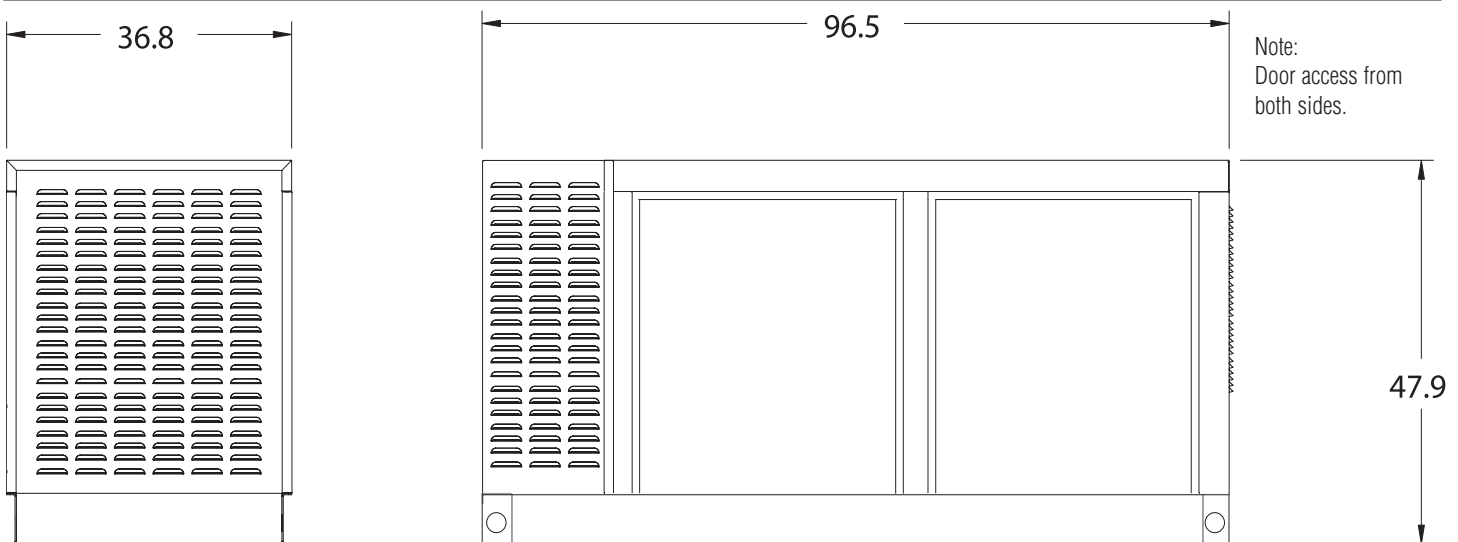
**OPERATING DATA**

		COMMERCIAL 70 kW		
KW RATING		70		
ENGINE SIZE		6.8 Liter V-10		
GENERATOR OUTPUT VOLTAGE/KW - 60 Hz		KW	AMP	CB Size
120/240V, single phase, 1.0 pf		70 LP / 68 NG	291.6 LP / 283.3 NG	300
120/208V, 3-phase, 0.8 pf		70 LP / 68 NG	243.1 LP / 236.2 NG	300
120/240V, 3-phase, 0.8 pf		70 LP / 68 NG	210.7 LP / 204.7 NG	250
277/480V, 3-phase, 0.8 pf		70 LP / 68 NG	105.3 LP / 102.4 NG	125
GENERATOR LOCKED ROTOR KVA AVAILABLE @ VOLTAGE DIP OF 35%				
Single phase or 208V & 240V 3-phase		145		
480V 3-phase		160		
ENGINE FUEL CONSUMPTION (Natural Gas) (Propane)		Natural Gas (ft <sup>3</sup> /hr.)	Propane (gal/hr.)	cu ft/hr
Exercise cycle		110	1.20	44.2
25% of rated load		260	2.85	104.9
50% of rated load		499	5.46	200.9
75% of rated load		696	7.62	280.4
100% of rated load		1020	11.17	411
ENGINE COOLING				
Air flow (inlet air including alternator and combustion air)	ft <sup>3</sup> /min.	5200		
System coolant capacity	US gal.	4.5		
Heat rejection to coolant	BTU/hr.	287,000		
Max. operating air temp. on radiator	°C (°F)	60 (150)		
Max. ambient temperature	°C (°F)	50 (140)		
COMBUSTION AIR REQUIREMENTS				
Flow at rated power 60 Hz	cfm	205		
SOUND EMISSIONS IN DBA				
db(A) @ 23 feet in exercise mode		61		
db(A) @ 23 feet at normal operating load		65		
EXHAUST				
Exhaust flow at rated output 60 Hz	cfm	557		
Exhaust temp. at muffler outlet	°F	890		
ENGINE PARAMETERS				
Rated synchronous RPM	60 Hz	1800		
HP at rated KW	60 Hz	110.7		
POWER ADJUSTMENT FOR AMBIENT CONDITIONS				
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		183		
3% for every 1000 ft. above - ft.		600		

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. Maximum wattage and current are subject to and limited by such factors as fuel Btu content, ambient temperature, altitude, engine power and condition, etc.



## INSTALLATION LAYOUT



**UNIT WEIGHT: Steel 2185 lbs., Aluminum 2040 lbs.**

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