

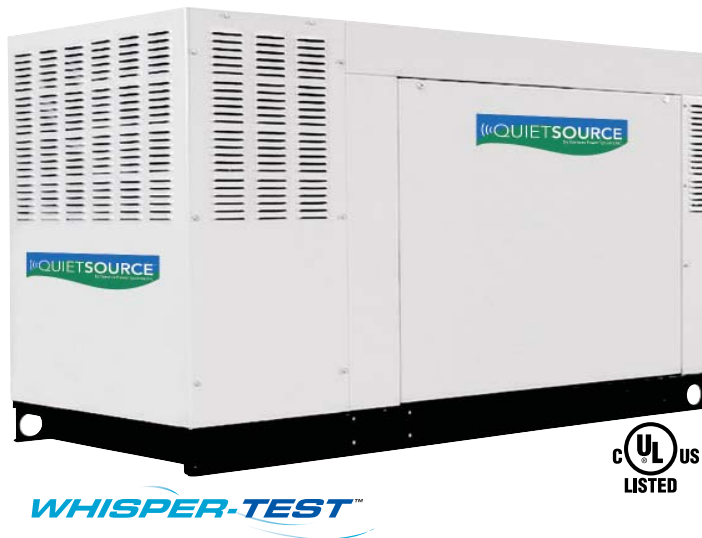
# Standby Power Rating

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## 45 kW 60 Hz

Liquid Cooled  
Gas Engine  
Generator Sets

Model Number: 05421 (Gray - Aluminum)



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

**GENERAC 4.2L ENGINE**

Naturally Aspirated  
Gaseous Fueled

UL 2200 Listed

Transfer Switches sold separately

## STANDARD EQUIPMENT

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- 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 rack and battery cables
- Fan and belt guards
- Isochronous governor
- Flex fuel line pigtail

## FEATURES

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- 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™* feature 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 R-Series 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



Standby 45 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).....	35 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 25 °C ambient
- Insulation is Class H rated at 150 °C rise
- All models are fully prototyped tested

## CONTROL PANEL FEATURES

- SEVEN LED INDICATOR LIGHTS
  - System ready
  - Low fuel pressure
  - Low battery
  - Low oil pressure
  - High coolant temp/low coolant temp
  - Overspeed
  - Overcrank
- 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
- ADDITIONAL FUNCTIONS
  - Utility sensing
  - Delay on utility failure for engine start
  - Engine warm-up before transfer
  - Delay to retransfer to utility
  - Engine cooldown timer
  - Exerciser not set

## ENGINE SPECIFICATIONS

MAKE .....	Generac
MODEL.....	V-6
CYLINDERS.....	6
DISPLACEMENT.....	4.2 Liter
BORE .....	3.81
STROKE.....	3.8
COMPRESSION RATIO.....	9.4:1
INTAKE AIR SYSTEM.....	Naturally Aspirated
VALVE SEATS .....	Precision ground and hardened
LIFTER TYPE.....	Roller, 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.....	5 Quarts

## ENGINE COOLING SYSTEM

TYPE .....	Pressurized Closed
WATER PUMP FLOW.....	10.8 gal/min
FAN SPEED .....	1300
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 26, 525 CCA
SYSTEM VOLTAGE.....	12 Volts



## Standby 45 kW

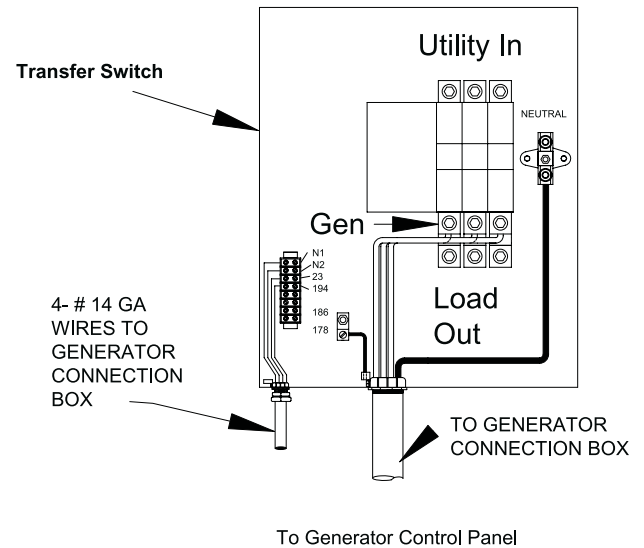
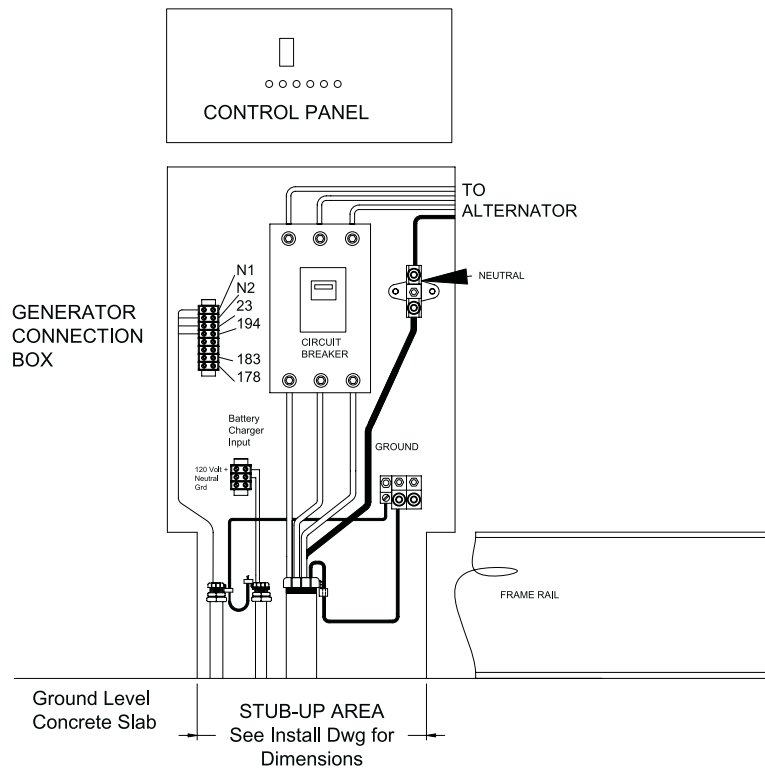
### OPERATING DATA

		STANDBY 45 kW		
KW RATING		45		
ENGINE SIZE		4.2 Liter V-6		
GENERATOR OUTPUT VOLTAGE/KW - 60Hz 120/240V, single phase, 1.0 pf		KW LP 45/NG 42	AMP LP 187.5/NG 179.2	CB Size 200
GENERATOR LOCKED ROTOR KVA AVAILABLE @ VOLTAGE DIP OF 35%                      single phase		100		
ENGINE FUEL CONSUMPTION (Natural Gas) (Propane)		Natural Gas (ft <sup>3</sup> /hr.)	Propane (gal/hr.)                      cu ft/hr	
Exercise cycle		104	1.4	50
25% of rated load		244	2.1	78
50% of rated load		388	3.9	144
75% of rated load		500	5.3	192
100% of rated load		630	6.6	240
ENGINE COOLING				
Air flow (inlet air including alternator and combustion air)	ft <sup>3</sup> /min.	2,460		
System coolant capacity	US gal.	3.0		
Heat rejection to coolant	BTU/hr.	190,000		
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	105		
SOUND EMISSIONS IN DBA				
db(A) @ 23 feet in exercise mode		60		
db(A) @ 23 feet at normal operating load		65		
EXHAUST				
Exhaust flow at rated output 60 Hz	cfm	336		
Exhaust temp. at muffler outlet	°F	1000		
ENGINE PARAMETERS				
Rated synchronous RPM	60 Hz	1800		
HP at rated KW	60 Hz	71		
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 fuelBtu content, ambient temperature, altitude, engine power and condition, etc.

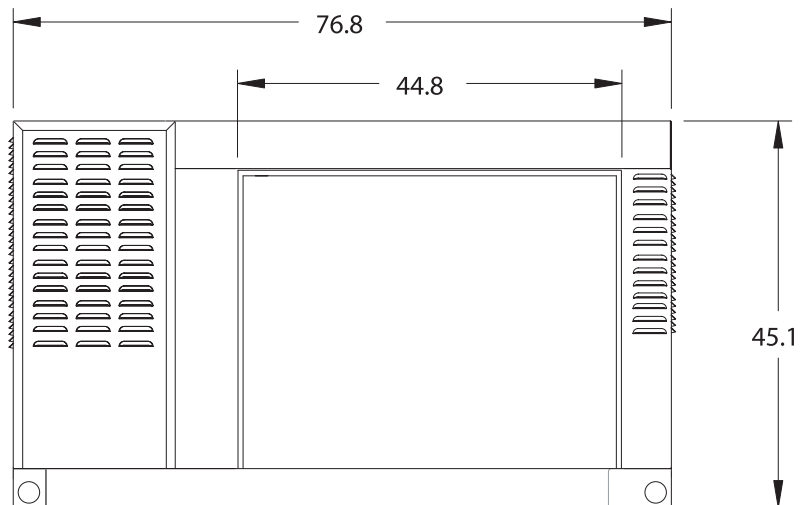
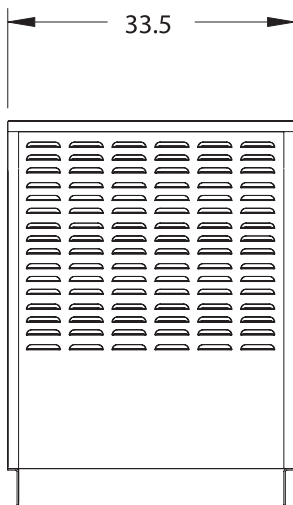
# INTERCONNECTIONS

Standby 45 kW



CIRCUIT BREAKER SIZE			
KW	VOLTS	AMPS	LUG SIZE
45	240 1 Ø	200	#6 to 300 mcm

# INSTALLATION LAYOUT



**UNIT WEIGHT: Aluminum 1703 lbs.**

**GENERAC® POWER SYSTEMS, INC. • P.O. BOX 297 • WHITEWATER, WI 53190**  
 WEBSITE: [www.guardiangenerators.com](http://www.guardiangenerators.com)