# Standby Power Rating 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

- · 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**

- · 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	
FEATURES	
	Adjustable Voltage and Gain
	, I ED 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**

•Utility sensing

•Delay on utility failure for engine start

Engine warm-up before transferDelay to retransfer to utility

Engine cooldown timerExerciser not set

#### ☐ SEVEN LED INDICATOR LIGHTS ☐ ADDITIONAL FUNCTIONS

- 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

## **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

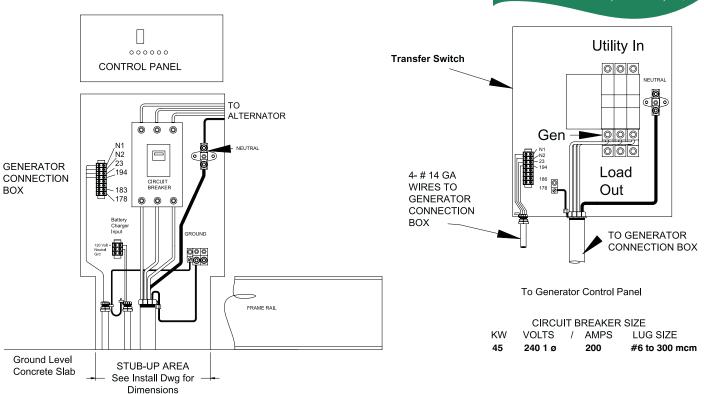
OPERATING DATA				
			STANDBY 45 kW	
KW RATING			45	
ENGINE SIZE			4.2 Liter V-6	
GENERATOR OUTPUT VOLTAGE/KW - 60Hz 120/240V, single phase, 1.0 pf		KW LP 45/NG 42	AMP LP 187.5/NG 179.2	CB Size 200
GENERATOR LOCKED ROTOR KVA AVAILABLE @ VOLTAGE DIP OF 35%	single phase		100	
ENGINE FUEL CONSUMPTION (Natural Gas) (Propane)  Exercise cycle 25% of rated load 50% of rated load 75% of rated load 100% of rated load		Natural Gas (ft <sup>3</sup> /hr.) 104 244 388 500 630	(gal/hr.) 1.4 2.1 3.9 5.3 6.6	cu ft/hr 50 78 144 192 240
ENGINE COOLING  Air flow (inlet air including alternator and combustion air System coolant capacity  Heat rejection to coolant  Max. operating air temp. on radiator  Max. ambient temperature	) ft <sup>3</sup> /min. US gal. BTU/hr. °C (°F) °C (°F)	2,460 3.0 190,000 60 (150) 50 (140)		
COMBUSTION AIR REQUIREMENTS Flow at rated power 60 Hz	cfm	105		
SOUND EMISSIONS IN DBA db(A) @ 23 feet in exercise mode db(A) @ 23 feet at normal operating load			60 65	
EXHAUST Exhaust flow at rated output 60 Hz Exhaust temp. at muffler outlet	cfm °F		336 1000	
ENGINE PARAMETERS Rated synchronous RPM HP at rated KW	60 Hz 60 Hz		1800 71	
POWER ADJUSTMENT FOR AMBIENT CONDITIONS Temperature Deration 3% for every 10 1.65% for every 10			25 77	
Altitude Deration 1% for every 10 3% for every 100			183 600	

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.

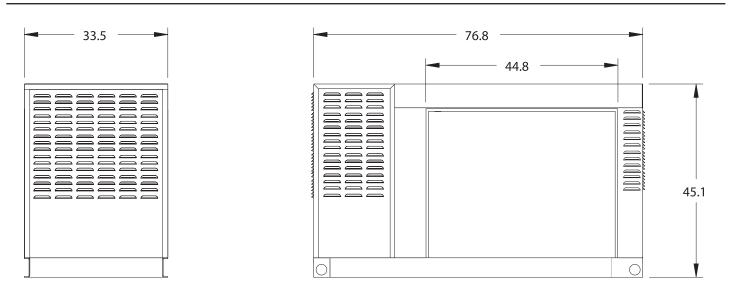
## **INTERCONNECTIONS**

Standby 45 kW





## **INSTALLATION LAYOUT**



**UNIT WEIGHT: Aluminum 1703 lbs.** 

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