

# Standby Power Rating

## 40 kW 60 Hz

### Liquid Cooled Gas Engine Generator Sets



**Quiet-Test Mode  
For Low Noise Exercise  
- 60 dB(A) at 23 feet**

#### **GENERAC 3.9L ENGINE**

Naturally Aspirated  
Gaseous Fueled

UL 2200 Listed



## 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

## FEATURES

- Innovative design and fully prototype tested
- UL2200 Listed
- Solid state frequency compensated digital 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
- R100 digital control panel
- State of the art digital control system
- 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

40 kW

## 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) .....      | 40 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<br>Adjustable Voltage and Gain<br>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

- SIX LED INDICATOR LIGHTS:
  - Overcrank shutdown
  - Low coolant level shutdown
  - Low oil pressure shutdown
  - System ready for operation
  - Exerciser not set (in auto mode only)
  - Delay on utility failure for engine start
  - Delay to retransfer to utility
  - Engine cooldown timer
  - Overspeed shutdown
  - High coolant temperature shutdown
  - Low battery voltage
  - No utility sensing
  - Low fuel pressure
  - Engine warmup before transfer
  - Delay to retransfer to utility
- 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 Type              |
| CYLINDERS .....         | 6                   |
| DISPLACEMENT .....      | 3.9 Liter           |
| BORE .....              | 3.91                |
| STROKE .....            | 3.31                |
| COMPRESSION RATIO ..... | 9.1:1               |
| INTAKE AIR SYSTEM ..... | Naturally Aspirated |
| VALVE SEATS .....       | Precision ground    |
| LIFTER TYPE .....       | Hydraulic           |

## GOVERNOR SPECIFICATIONS

|                               |            |
|-------------------------------|------------|
| TYPE .....                    | Electronic |
| FREQUENCY REGULATION .....    | ± 1%       |
| STEADY STATE REGULATION ..... | ± 1/2%     |
| ADJUSTMENTS                   |            |
| Speed .....                   | Yes        |
| Droop .....                   | Yes        |

## ENGINE LUBRICATION SYSTEM

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

## ENGINE COOLING SYSTEM

|                    |             |
|--------------------|-------------|
| TYPE .....         | Closed      |
| WATER PUMP .....   | Belt driven |
| FAN SPEED .....    | 2190        |
| 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 .....  | .5" - 14" H <sub>2</sub> O |

## ELECTRICAL SYSTEM

|                                 |            |
|---------------------------------|------------|
| BATTERY CHARGE ALTERNATOR ..... | 12V 30 Amp |
| STATIC BATTERY CHARGER .....    | 2 Amp      |
| RECOMMENDED BATTERY .....       | 24F 625CCA |
| SYSTEM VOLTAGE .....            | 12 Volts   |

Rating definitions - Standby: Applicable for supplying emergency power for the duration of the utility power outage. No overload capability is available for this rating. (All ratings in accordance with BS5514, ISO3046 and DIN6271). (All ratings in accordance with BS5514, ISO3046, ISO8528 and DIN6271).

40 kW

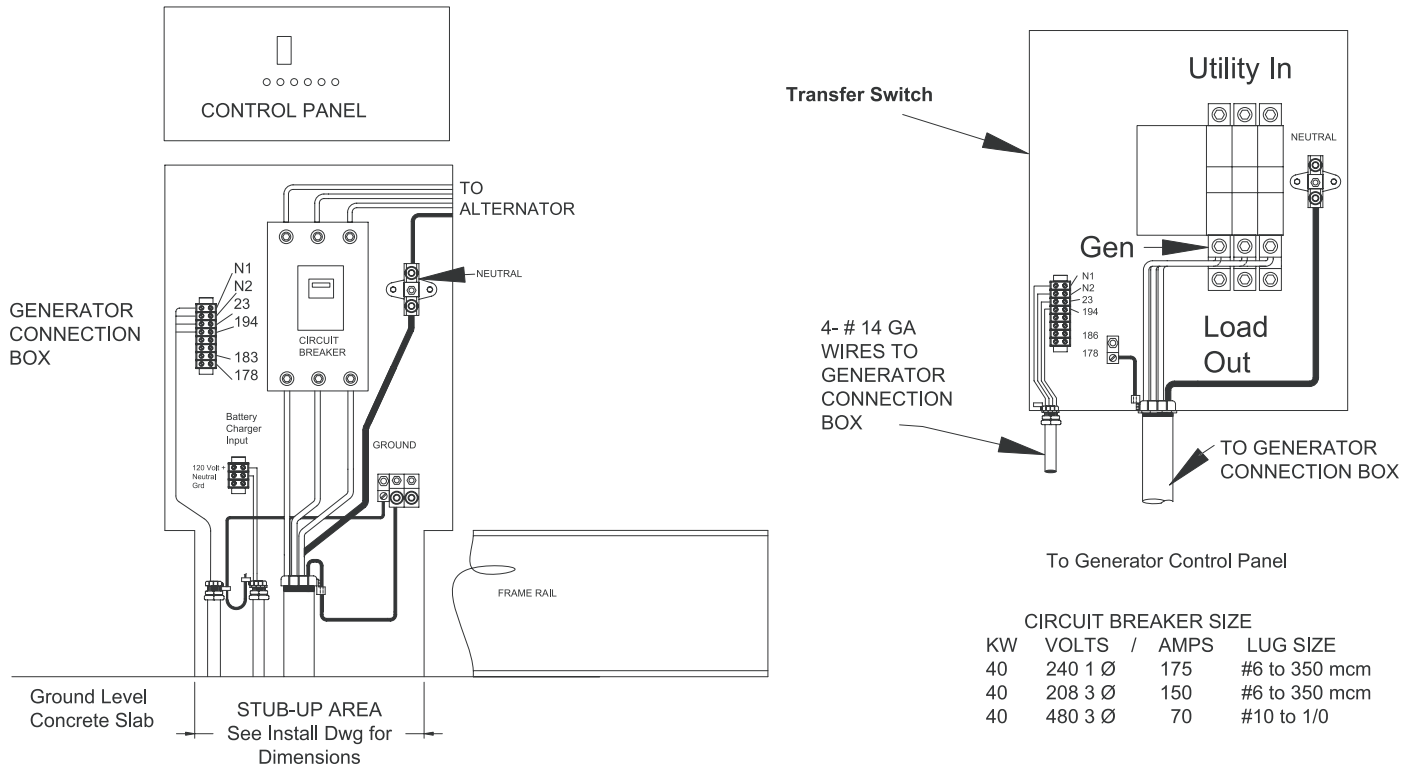
## OPERATING DATA

|                                                                  |  | COMMERCIAL 40 kW      |            |                |
|------------------------------------------------------------------|--|-----------------------|------------|----------------|
| <b>KW RATING</b>                                                 |  | 40                    |            |                |
| <b>ENGINE SIZE</b>                                               |  | 3.9 Liter V-6         |            |                |
| <b>GENERATOR OUTPUT VOLTAGE/KW - 60Hz</b>                        |  | <b>KW</b>             | <b>AMP</b> | <b>CB Size</b> |
| 120/240V, 1-phase, 1.0 pf                                        |  | 40                    | 167        | 175            |
| 120/208V, 3-phase, 3.0 pf                                        |  | 40                    | 139        | 150            |
| 277/480V, 3-phase, 3.0 pf                                        |  | 40                    | 60         | 70             |
| <b>GENERATOR LOCKED ROTOR KVA AVAILABLE @ VOLTAGE DIP OF 35%</b> |  |                       |            |                |
| Single phase or 208 3-phase                                      |  | 80                    |            |                |
| 480V 3-phase                                                     |  | 90                    |            |                |
| <b>ENGINE FUEL CONSUMPTION (Natural Gas)</b>                     |  |                       |            |                |
| Exercise cycle                                                   |  | ft <sup>3</sup> /hr.  | 93         |                |
| 25% of rated load                                                |  | ft <sup>3</sup> /hr.  | 148        |                |
| 50% of rated load                                                |  | ft <sup>3</sup> /hr.  | 285        |                |
| 75% of rated load                                                |  | ft <sup>3</sup> /hr.  | 397        |                |
| 100% of rated load                                               |  | ft <sup>3</sup> /hr.  | 555        |                |
| <b>ENGINE COOLING</b>                                            |  |                       |            |                |
| Air flow (inlet air including alternator and combustion air)     |  | ft <sup>3</sup> /min. | 2725       |                |
| Coolant capacity                                                 |  | US gal.               | 3.0        |                |
| Heat rejection to coolant                                        |  | BTU/hr.               | 153,000    |                |
| 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                   | 118        |                |
| <b>SOUND EMISSIONS IN DBA</b>                                    |  |                       |            |                |
| Exercising at 7 meters                                           |  | 60                    |            |                |
| Full load at 7 meters                                            |  | 73                    |            |                |
| <b>EXHAUST</b>                                                   |  |                       |            |                |
| Exhaust flow at rated output 60 Hz                               |  | cfm                   | 360        |                |
| Exhaust temp. at muffler outlet                                  |  | °F                    | 925        |                |
| <b>ENGINE PARAMETERS</b>                                         |  |                       |            |                |
| Rated synchronous RPM                                            |  | 60 Hz                 | 1800       |                |
| HP at rated KW                                                   |  | 60 Hz                 | 62         |                |
| <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                                     |  | 182                   |            |                |
| 3% for every 1000 ft. above - ft.                                |  | 600                   |            |                |

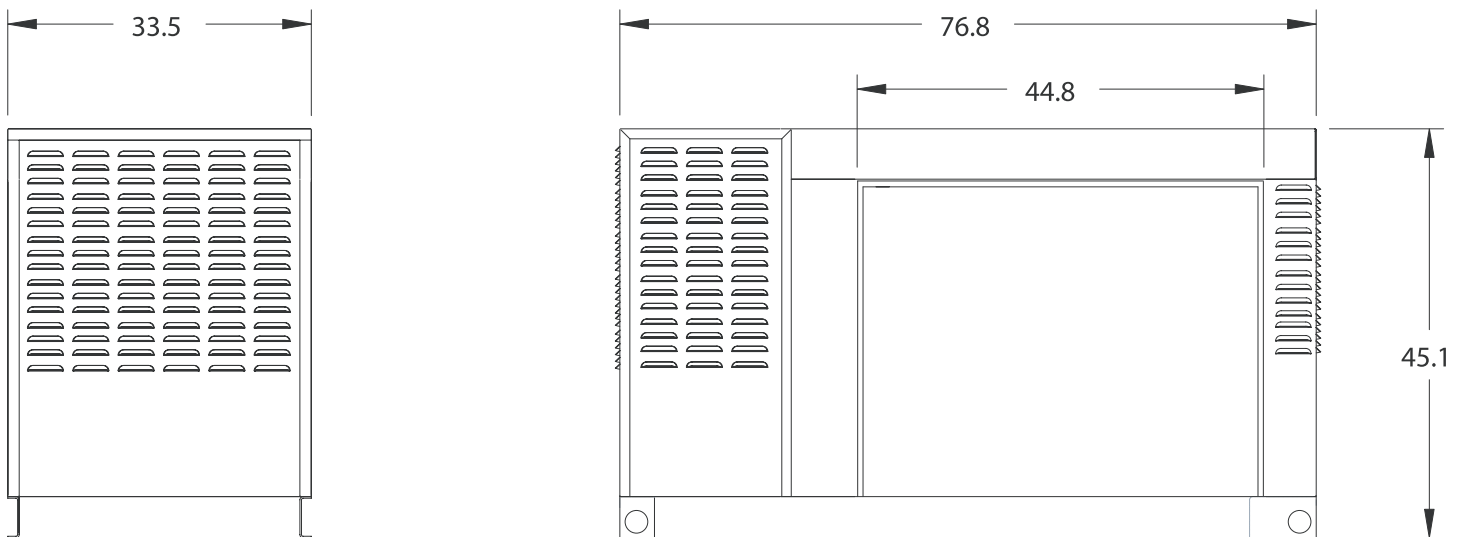
**RATING:** All three phases units are rated at 0.8 power factor. All single phase units are rated at 1.0 power factor. **STANDBY RATING:** Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. 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. KW rating is based on LPG Fuel and may derate with natural gas.

# INTERCONNECTIONS

40 kW



# INSTALLATION LAYOUT



**UNIT WEIGHT 1658 LBS.**

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