

QT022

Liquid Cooled Gas Engine Generator Sets

Standby Power Rating
22 kVA 50 Hz



GENERAC 2.4L ENGINE

Naturally Aspirated
Gaseous Fueled
Meets 2009 EPA Emission Regulations

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 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

GENERAC®

APPLICATION & ENGINEERING DATA

QT022

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)..... | 22 kVA |
| 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

- 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
 - Hour meter

ENGINE SPECIFICATIONS

| | |
|------------------------|---------------------|
| MAKE | Generac |
| MODEL..... | Inline 4 |
| CYLINDERS..... | 4 |
| DISPLACEMENT..... | 2.4 Liter |
| BORE..... | 3.41 |
| STROKE..... | 3.94 |
| COMPRESSION RATIO..... | 8.5:1 |
| INTAKE AIR SYSTEM..... | Naturally Aspirated |
| 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 | 1650 |
| FAN DIAMETER..... | 17.75 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 ₂ O |

ELECTRICAL SYSTEM

| | |
|--------------------------------|------------------|
| BATTERY CHARGE ALTERNATOR..... | 12V 30 Amp |
| STATIC BATTERY CHARGER | 2 Amp |
| RECOMMENDED BATTERY | Group 26, 525CCA |
| SYSTEM VOLTAGE..... | 12 Volts |

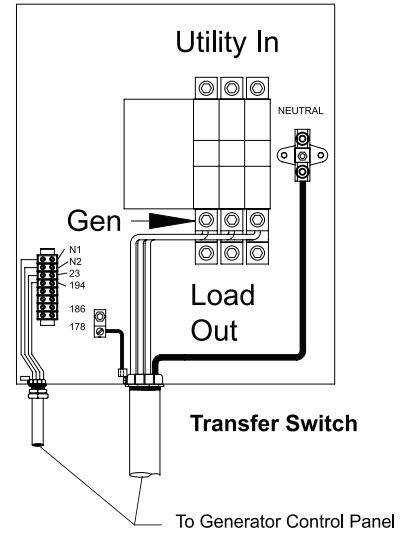
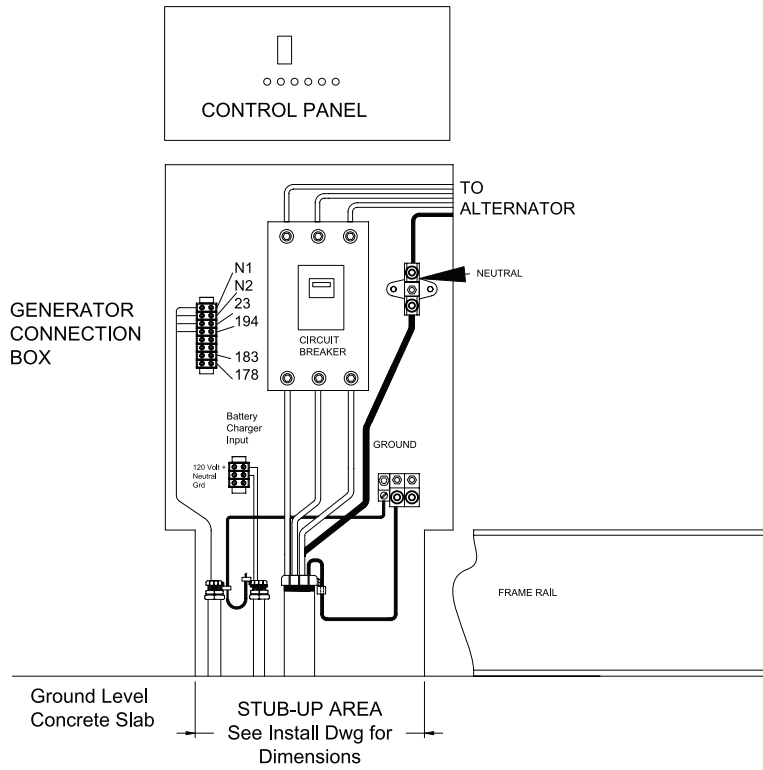
OPERATING DATA

| | | | | | |
|---|-----------------------------------|-----------------------|-----------|--------------|-----------------------|
| KW RATING | 22 | | | | |
| ENGINE SIZE | 2.4 Liter Inline 4 | | | | |
| GENERATOR OUTPUT VOLTAGE/KW - 50Hz | kW | kVA | AMP | CB Size | |
| 110/220V, 1-phase, 1.0 pf | 17.6 | 17.6 | 80 | 100 | |
| 110/220V, 3-phase, 0.8 pf | 17.6 | 22 | 58 | 70 | |
| 220/380V, 3-phase, 0.8 pf | 17.6 | 22 | 33 | 40 | |
| GENERATOR LOCKED ROTOR KVA AVAILABLE @ VOLTAGE DIP OF 35% | | | | | |
| Single phase or 208/240 3-phase | 36 | | | | |
| 380 3-phase | 47 | | | | |
| ENGINE FUEL CONSUMPTION | Natural Gas | | Propane | | |
| | (ft ³ /hr.) | (M ³ /hr.) | (gal/hr.) | (liters/hr.) | (M ³ /hr.) |
| 25% of rated load | 83 | 2.36 | 0.92 | 3.47 | 0.94 |
| 50% of rated load | 158 | 4.48 | 1.74 | 6.60 | 1.79 |
| 75% of rated load | 212 | 6.01 | 2.34 | 8.86 | 2.41 |
| 100% of rated load | 263 | 7.45 | 2.90 | 10.98 | 2.98 |
| ENGINE COOLING | | | | | |
| Air flow (inlet air including alternator and combustion air)ft ³ /min. | 2,000 | | | | |
| System coolant capacity US gal. | 2.5 | | | | |
| Heat rejection to coolant BTU/hr. | 83,000 | | | | |
| Max. operating air temp. on radiator °C (°F) | 60 (150) | | | | |
| Max. ambient temperature °C (°F) | 50 (140) | | | | |
| COMBUSTION AIR REQUIREMENTS | | | | | |
| Flow at rated power 50 Hz | cfm | 57 | | | |
| SOUND EMISSIONS IN DBA | | | | | |
| Normal operation at 7 meters | 70 | | | | |
| EXHAUST | | | | | |
| Exhaust flow at rated output 50 Hz | cfm | 140 | | | |
| Exhaust temp. at muffler outlet | °F | 875 | | | |
| ENGINE PARAMETERS | | | | | |
| Rated synchronous RPM | 50 Hz | 1500 | | | |
| HP at rated kW | 50 Hz | 28 | | | |
| 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 | | | | 914 |
| | 3% for every 1000 ft. above - ft. | | | | 3000 |
| ENCLOSURE | | | | | |
| Material | Aluminum | | | | |
| Color | PMS 422 (Bisque) | | | | |

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

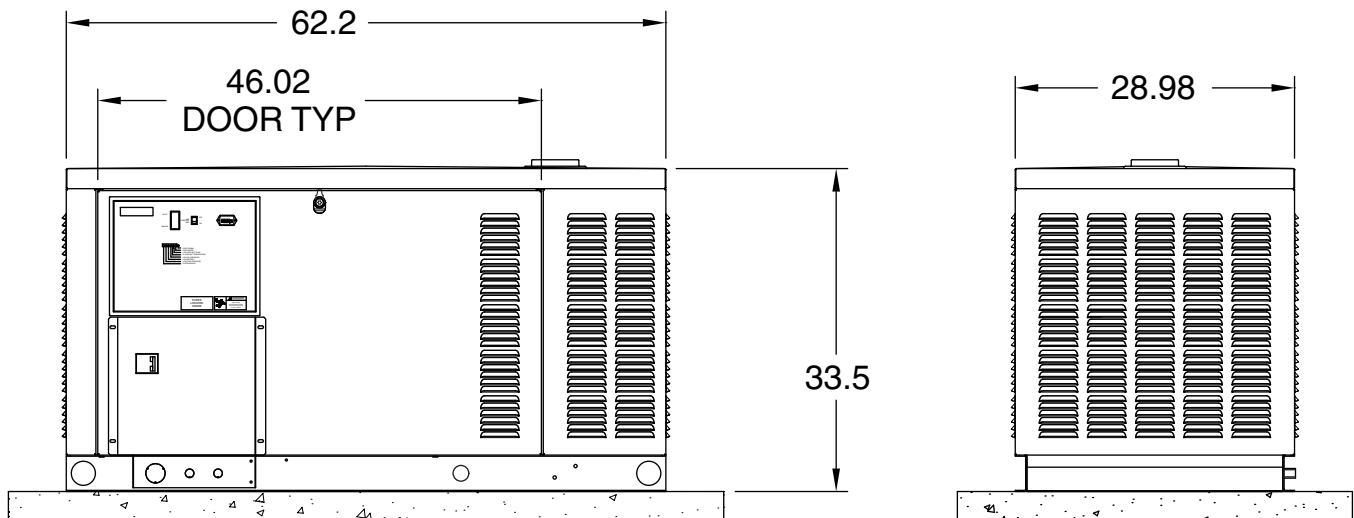
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| CIRCUIT BREAKER SIZE | | | |
|----------------------|---------|------|-----------|
| kVA | VOLTS | AMPS | LUG SIZE |
| 17.6 | 240 1 Ø | 100 | #6 to 2/0 |
| 22 | 240 3 Ø | 70 | #6 to 2/0 |
| 22 | 380 3 Ø | 40 | #6 to 2/0 |

Installation Drawing Ref. No. 0G0325

INSTALLATION LAYOUT



SEE INSTALL DWG 0G9370 FOR DETAILS

FRONT VIEW

WEIGHT: 843 lbs.



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