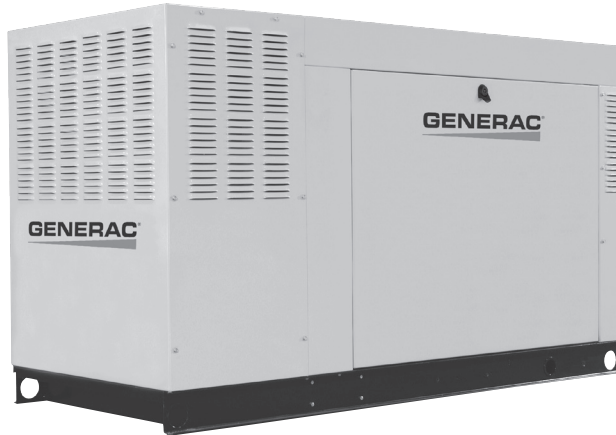


# QT048

## Liquid Cooled Gas Engine Generator Sets

Standby Power Rating  
48 kW 60 Hz



### GENERAC 4.2L 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<sup>®</sup>

# APPLICATION & ENGINEERING DATA

QT048

## 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).....       | 48 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

- |                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> SEVEN LED INDICATOR LIGHTS <ul style="list-style-type: none"><li>• System ready</li><li>• Low fuel pressure</li><li>• Low battery</li><li>• Low oil pressure</li><li>• High coolant temp/low coolant temp</li><li>• Overspeed</li><li>• Overcrank</li></ul> | <input type="checkbox"/> ADDITIONAL FUNCTIONS <ul style="list-style-type: none"><li>• Utility sensing</li><li>• Delay on utility failure for engine start</li><li>• Engine warm-up before transfer</li><li>• Delay to retransfer to utility</li><li>• Engine cooldown timer</li><li>• Exerciser not set</li><li>• Hour meter</li></ul> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
- 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.....                      | V6                            |
| CYLINDERS.....                  | 6                             |
| DISPLACEMENT.....               | 4.2 Liter                     |
| BORE (inches) .....             | 3.81                          |
| STROKE (inches).....            | 3.74                          |
| COMPRESSION RATIO.....          | 9.3:1                         |
| INTAKE AIR SYSTEM.....          | Naturally Aspirated           |
| VALVE SEATS (Int. & Exh.) ..... | Precision ground and hardened |
| LIFTER TYPE.....                | Roller, Hydraulic             |

## GOVERNOR SPECIFICATIONS

|                              |             |
|------------------------------|-------------|
| TYPE .....                   | Electronic  |
| FREQUENCY REGULATION.....    | Isochronous |
| STEADY STATE REGULATION..... | ± 0.25%     |

## ENGINE LUBRICATION SYSTEM

|                         |                             |
|-------------------------|-----------------------------|
| OIL PUMP .....          | Gear                        |
| OIL FILTER.....         | Full flow spin-on cartridge |
| CRANKCASE CAPACITY..... | 6 Quarts                    |

## ENGINE COOLING SYSTEM

|                      |                    |
|----------------------|--------------------|
| TYPE .....           | Pressurized Closed |
| WATER PUMP FLOW..... | 10.8 gal/min       |
| FAN SPEED .....      | 1050               |
| 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 24F, 525CCA |
| SYSTEM VOLTAGE.....            | 12 Volts          |

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## OPERATING DATA

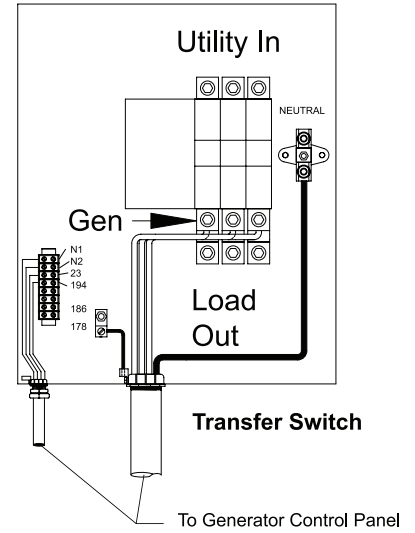
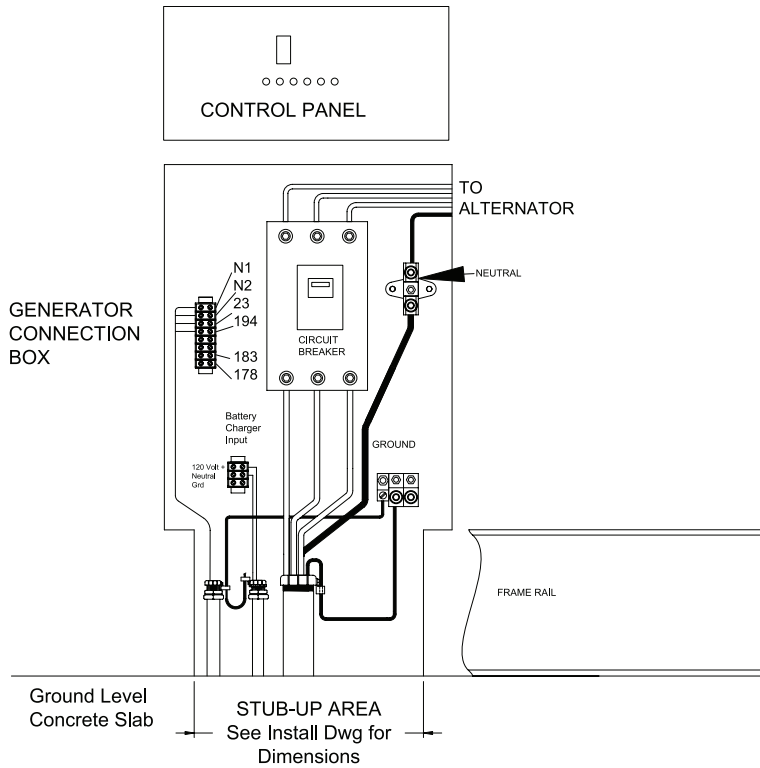
|                                                                  |                       | QT048                  |             |                |             |                |
|------------------------------------------------------------------|-----------------------|------------------------|-------------|----------------|-------------|----------------|
| <b>KW RATING</b>                                                 |                       | 48                     |             |                |             |                |
| <b>ENGINE SIZE</b>                                               |                       | 4.2 Liter              |             |                |             |                |
| <b>GENERATOR OUTPUT VOLTAGE/KW - 60Hz</b>                        |                       | <b>kW - LP</b>         | <b>Amps</b> | <b>kW - NG</b> | <b>Amps</b> | <b>CB Size</b> |
| 120/240V, 1-phase, 1.0 pf                                        |                       | 48                     | 200         | 46             | 192         | 200            |
| 120/208V, 3-phase, 0.8 pf                                        |                       | 48                     | 166         | 46             | 160         | 175            |
| 120/240V, 3-phase, 0.8 pf                                        |                       | 48                     | 144         | 46             | 138         | 150            |
| 277/480V, 3-phase, 0.8 pf                                        |                       | 48                     | 72          | 46             | 69          | 80             |
| <b>GENERATOR LOCKED ROTOR KVA AVAILABLE @ VOLTAGE DIP OF 35%</b> |                       |                        |             |                |             |                |
| Single phase or 208 3-phase                                      |                       | 100                    |             |                |             |                |
| 480V 3-phase                                                     |                       | 110                    |             |                |             |                |
| <b>ENGINE FUEL CONSUMPTION (Natural Gas) (Propane)</b>           |                       | <b>Natural Gas</b>     |             | <b>Propane</b> |             |                |
|                                                                  |                       | (ft <sup>3</sup> /hr.) | (gal/hr.)   | cu ft/hr       |             |                |
| Exercise cycle                                                   |                       | 88                     | 0.94        | 34.4           |             |                |
| 25% of rated load                                                |                       | 205                    | 2.23        | 81             |             |                |
| 50% of rated load                                                |                       | 370                    | 4.03        | 147            |             |                |
| 75% of rated load                                                |                       | 516                    | 5.62        | 204            |             |                |
| 100% of rated load                                               |                       | 661                    | 7.20        | 261            |             |                |
| <b>ENGINE COOLING</b>                                            |                       |                        |             |                |             |                |
| 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.               | 165,000                |             |                |             |                |
| 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                   | 235                    |             |                |             |                |
| <b>SOUND EMISSIONS IN DBA</b>                                    |                       |                        |             |                |             |                |
| Exercising at 7 meters                                           |                       | 60                     |             |                |             |                |
| Normal operation at 7 meters                                     |                       | 65                     |             |                |             |                |
| <b>EXHAUST</b>                                                   |                       |                        |             |                |             |                |
| Exhaust flow at rated output 60 Hz                               | cfm                   | 395                    |             |                |             |                |
| Exhaust temp. at muffler outlet                                  | °F                    | 1100                   |             |                |             |                |
| <b>ENGINE PARAMETERS</b>                                         |                       |                        |             |                |             |                |
| Rated synchronous RPM                                            | 60 Hz                 | 1800                   |             |                |             |                |
| HP at rated KW                                                   | 60 Hz                 | 75                     |             |                |             |                |
| <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                                     |                       | 183                    |             |                |             |                |
| 3% for every 1000 ft. above - ft.                                |                       | 600                    |             |                |             |                |

RATING: All three phase 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, BS5514, and DIN6271. Maximum wattage and current are subject to and limited by such factors as fuel Btu content, ambient temperature, altitude, engine power and condition. Design and specifications are subject to change without notice.

KW rating is based on LPG Fuel and may derate with natural gas.

# INTERCONNECTIONS

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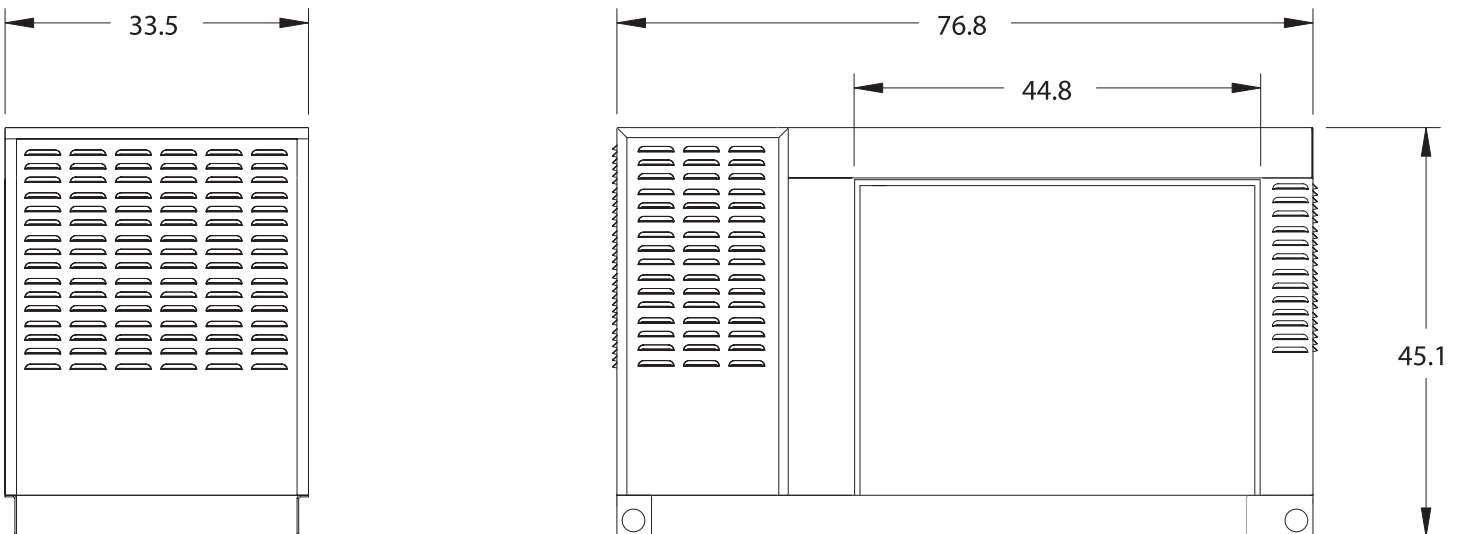


### CIRCUIT BREAKER SIZE

| KW    | VOLTS  | AMPS | LUG SIZE      |
|-------|--------|------|---------------|
| 48/46 | 240 1Ø | 200  | #6 to 300 mcm |
| 48/46 | 208 3Ø | 175  | #6 to 300 mcm |
| 48/46 | 240 3Ø | 150  | #6 to 300 mcm |
| 48/46 | 480 3Ø | 80   | #6 to 300 mcm |

Installation Drawing Ref. No. 0G5868

# INSTALLATION LAYOUT



**WEIGHT: 1740 lbs.**



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