

# QT030

## Liquid Cooled Gas Engine Generator Sets

Standby Power Rating  
30 kW 60 Hz



### GENERAC 1.6L 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
- 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®

## GENERATOR SPECIFICATIONS

|                                           |               |
|-------------------------------------------|---------------|
| TYPE .....                                | Synchronous   |
| ROTOR INSULATION.....                     | Class F       |
| STATOR INSULATION.....                    | Class F       |
| 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).....       | 30 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 F rated at 130 °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></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.....             | In line             |
| CYLINDERS.....         | 4                   |
| DISPLACEMENT.....      | 1.6 Liter           |
| BORE.....              | 3.15                |
| STROKE.....            | 3.13                |
| COMPRESSION RATIO..... | 9.75:1              |
| INTAKE AIR SYSTEM..... | Naturally Aspirated |
| VALVE SEATS.....       | Replaceable         |
| LIFTER TYPE.....       | 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..... | 4 Quarts                    |

## ENGINE COOLING SYSTEM

|                   |             |
|-------------------|-------------|
| TYPE .....        | Closed      |
| WATER PUMP.....   | Belt driven |
| FAN SPEED .....   | 2550        |
| FAN DIAMETER..... | 15 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 .....      | Group 26, 525CCA |
| SYSTEM VOLTAGE.....            | 12 Volts         |

QT030

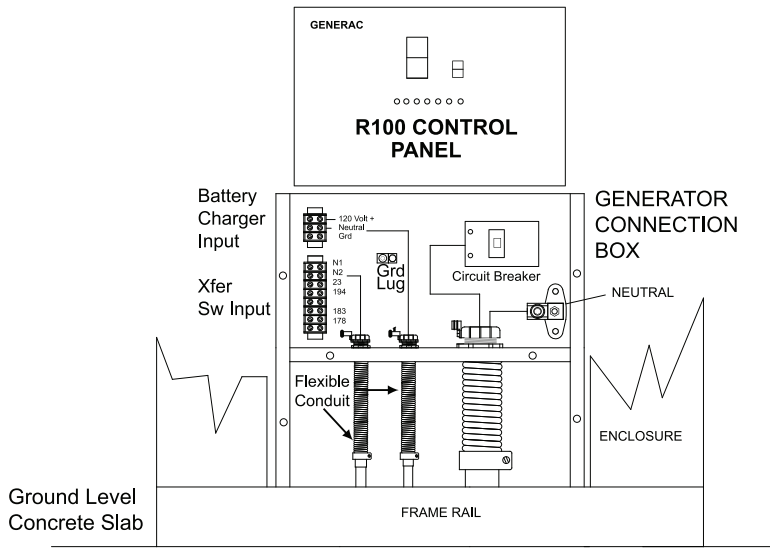
## OPERATING DATA

|                                                                                                 |  | QT030                   |                |                |
|-------------------------------------------------------------------------------------------------|--|-------------------------|----------------|----------------|
| <b>KW RATING</b>                                                                                |  | 30                      |                |                |
| <b>ENGINE SIZE</b>                                                                              |  | 1.6 Liter 4 cyl. inline |                |                |
| <b>GENERATOR OUTPUT VOLTAGE/KW - 60Hz</b>                                                       |  | <b>KW</b>               | <b>AMP</b>     | <b>CB Size</b> |
| 120/240V, 1-phase, 1.0 pf                                                                       |  | 30                      | 125            | 150            |
| 120/208V, 3-phase, 0.8 pf                                                                       |  | 30                      | 104            | 125            |
| 120/240V, 3-phase, 0.8 pf (Consult Factory)                                                     |  | 30                      | 90             | 100            |
| 277/480V, 3-phase, 0.8 pf (Consult Factory)                                                     |  | 30                      | 45             | 50             |
| <b>GENERATOR LOCKED ROTOR KVA AVAILABLE @ VOLTAGE DIP OF 35%</b><br>Single phase or 208 3-phase |  | 56 (75)                 |                |                |
| <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                                                                                  |  | 60                      | 0.65           | 24             |
| 25% of rated load                                                                               |  | 193                     | 2.1            | 76             |
| 50% of rated load                                                                               |  | 300                     | 3.3            | 120            |
| 75% of rated load                                                                               |  | 415                     | 4.5            | 165            |
| 100% of rated load                                                                              |  | 525                     | 5.7            | 209            |
| <b>ENGINE COOLING</b>                                                                           |  |                         |                |                |
| Air flow (inlet air including alternator and combustion air)                                    |  | ft <sup>3</sup> /min.   | 1,800          |                |
| System coolant capacity                                                                         |  | US gal.                 | 2.0            |                |
| Heat rejection to coolant                                                                       |  | BTU/hr.                 | 131,000        |                |
| 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                     | 95             |                |
| <b>SOUND EMISSIONS IN DBA</b>                                                                   |  |                         |                |                |
| Exercising at 7 meters                                                                          |  | 62                      |                |                |
| Normal operation at 7 meters                                                                    |  | 75                      |                |                |
| <b>EXHAUST</b>                                                                                  |  |                         |                |                |
| Exhaust flow at rated output 60 Hz                                                              |  | cfm                     | 260            |                |
| Exhaust temp. at muffler outlet                                                                 |  | °F                      | 1025           |                |
| <b>ENGINE PARAMETERS</b>                                                                        |  |                         |                |                |
| Rated synchronous RPM                                                                           |  | 60 Hz                   | 3600           |                |
| HP at rated KW                                                                                  |  | 60 Hz                   | 48             |                |
| <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                     |                |                |

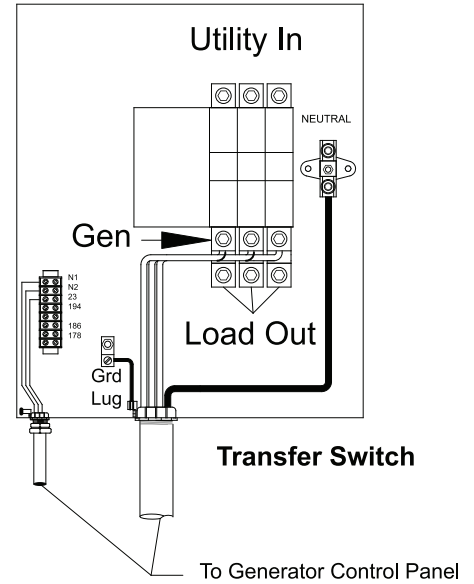
RATING: All three phases units are rated at 0.8 power factor. All single phase units are rated at 1.0 power factor. STANDBY RATING: Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. There is 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.

## C1 Enclosure 18, 20, 25, 30 kW 1.6 Liter QT



Installation Drawing Ref. No. 0G5116



### CIRCUIT BREAKER SIZE

| KW | VOLTS  | AMPS | LUG SIZE      |
|----|--------|------|---------------|
| 30 | 240 1Ø | 150  | #1 to 300 mcm |
| 30 | 208 3Ø | 125  | #3 to 3/0     |
| 30 | 240 3Ø | 100  | #10 to 1/0    |
| 30 | 480 3Ø | 50   | #10 to 1/0    |

# INSTALLATION LAYOUT

