

# QT070

## Liquid Cooled Gas Engine Generator Sets

Standby Power Rating  
**70 kW 60 Hz**



### **GENERAC 6.8L 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
- Low fuel pressure
- Overspeed automatic shutdown
- Adjustable cranking timer
- Adjustable 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
- Oil drain extension to frame rail
- 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
- State of the art digital control system with H-100 microprocessor control panel
- Built-in kW, kVAR and power factor meters
- 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

QT070

## 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).....	70 kW
EXCITATION SYSTEM.....	Brushless

**NOTE:** Generator rating and performance in accordance with ISO8528-5, BS5514, SAE J1349, ISO3046, and DIN6271 standards.

## VOLTAGE REGULATOR

TYPE .....	Full Digital
SENSING .....	3 Phase
REGULATION.....	± 1/4%
FEATURES.....	Built into H-100 Control Panel V/F Adjustable Adjustable Voltage and Gain

## 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 prototype models have passed three phase short circuit testing

## CONTROL PANEL FEATURES

- ☐ TWO FOUR LINE LCD DISPLAYS READ:
  - Voltage (all phases)
  - Power factor
  - kVAR
  - Engine speed
  - Run hours
  - Fault history
  - Coolant temperature
  - Low oil pressure shutdown
  - Overvoltage
  - Low coolant level
  - Not in auto position (flashing light)
  - ATS selection
  - Current (all phases)
  - kW
  - Transfer switch status
  - Low fuel pressure
  - Service reminders
  - Oil pressure
  - Time and date
  - High coolant temperature shutdown
  - Overspeed
  - Low coolant level
  - Exercise speed
- ☐ INTERNAL FUNCTIONS:
  - I<sup>2</sup>T function for alternator protection from line to neutral and line to line short circuits
  - Emergency stop
  - Programmable auto crank function
  - 2 wire start for any transfer switch
  - Communicates with the Generac HTS transfer switch
  - Built-in 7 day exerciser
  - Adjustable engine speed at exerciser
  - RS232 port for GenLink® control
  - RS485 port remote communication
  - Canbus addressable
  - Governor controller and voltage regulator are built into the master control board
  - Temperature range -40 °C to 70 °C

## ENGINE SPECIFICATIONS

MAKE .....	Generac
MODEL.....	V Type
CYLINDERS .....	10
DISPLACEMENT.....	6.8 Liter
BORE .....	3.55
STROKE.....	4.17
COMPRESSION RATIO.....	9:1
INTAKE AIR SYSTEM.....	Naturally Aspirated
VALVE SEATS .....	Hardened
LIFTER TYPE.....	Hydraulic

## GOVERNOR SPECIFICATIONS

TYPE .....	Electronic
FREQUENCY REGULATION .....	Isochronous
STEADY STATE REGULATION.....	± 0.25%
All functions are factory preset	
Individual parameter adjustments can be made via GenLink®	

## ENGINE LUBRICATION SYSTEM

OIL PUMP .....	Gear
OIL FILTER.....	Full flow spin-on cartridge
CRANKCASE CAPACITY.....	5 Quarts

## ENGINE COOLING SYSTEM

TYPE .....	Closed
WATER PUMP .....	Belt driven
FAN SPEED .....	2030
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.....	11" - 14" H <sub>2</sub> O

## ELECTRICAL SYSTEM

BATTERY CHARGE ALTERNATOR.....	12V 30 Amp
STATIC BATTERY CHARGER .....	12V 2 Amp
RECOMMENDED BATTERY .....	Group 24F, 525CCA
SYSTEM VOLTAGE.....	12 Volts

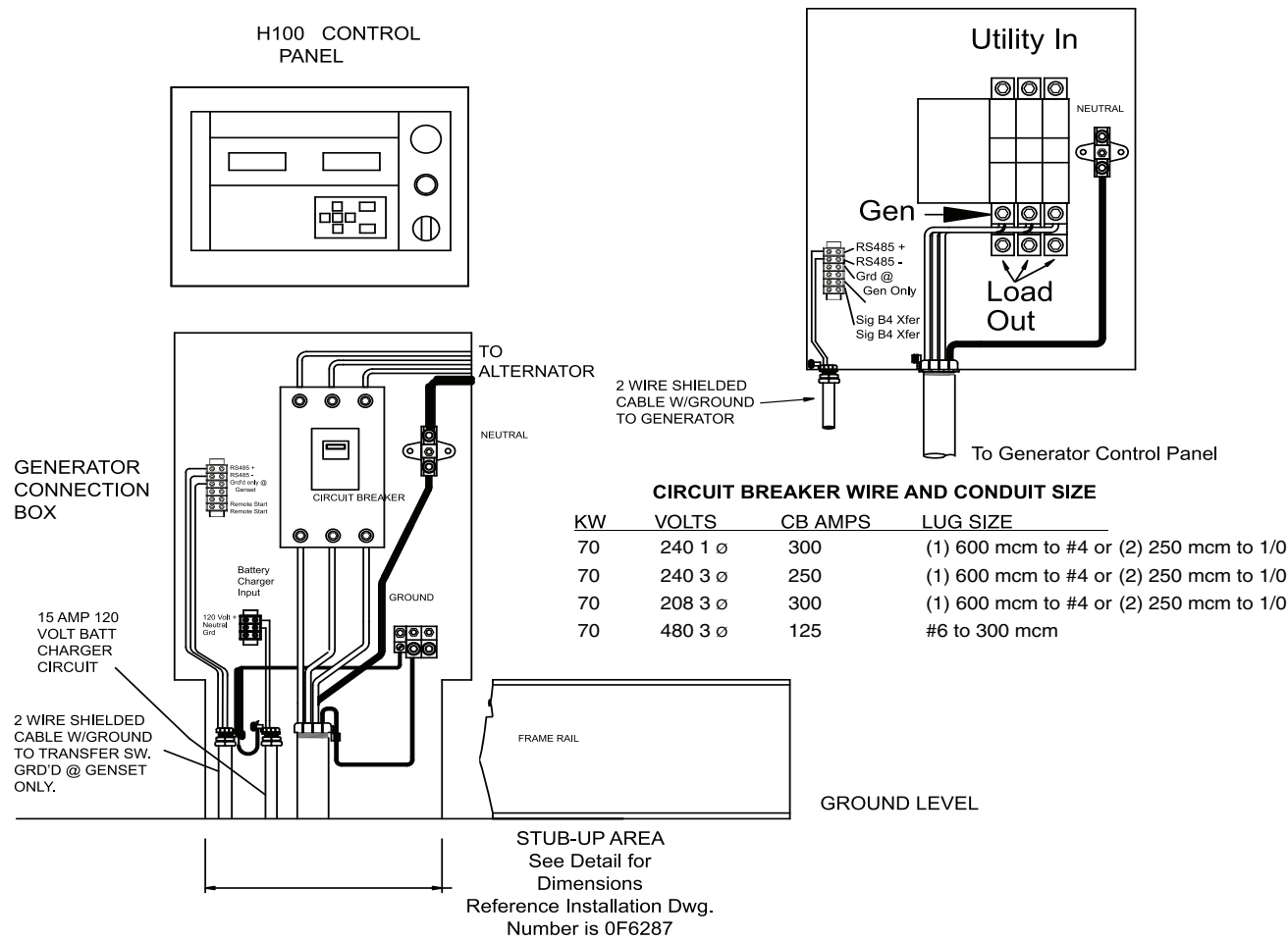
QT070

## OPERATING DATA

	QT070		
<b>KW RATING</b>	70		
<b>ENGINE SIZE</b>	6.8 Liter V-10		
<b>GENERATOR OUTPUT VOLTAGE/KW - 60 Hz</b>	<b>KW</b>	<b>AMP</b>	<b>CB Size</b>
120/240V, 1-phase, 1.0 pf	70	292	300
120/240V, 3-phase, 0.8 pf	70	210	250
120/208V, 3-phase, 0.8 pf	70	243	300
277/480V, 3-phase, 0.8 pf	70	105	125
<b>GENERATOR LOCKED ROTOR KVA AVAILABLE @ VOLTAGE DIP OF 35%</b>			
Single phase or 208-240 3-phase	145		
480V 3-phase	160		
<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	110	1.20	44.2
25% of rated load	260	2.85	104.9
50% of rated load	499	5.46	200.9
75% of rated load	696	7.62	280.4
100% of rated load	1020	11.17	411
<b>ENGINE COOLING</b>			
Air flow (inlet air including alternator and combustion air) ft <sup>3</sup> /min.	5200		
System coolant capacity US gal.	4.5		
Heat rejection to coolant BTU/hr.	287,000		
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	205		
<b>SOUND EMISSIONS IN DBA</b>			
Exercising at 7 meters	61		
Normal operation at 7 meters	65		
<b>EXHAUST</b>			
Exhaust flow at rated output 60 Hz cfm	557		
Exhaust temp. at muffler outlet °F	890		
<b>ENGINE PARAMETERS</b>			
Rated synchronous RPM 60 Hz	1800		
HP at rated KW 60 Hz	110.7		
<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.

Transfer Switch



INSTALLATION LAYOUT

