

# QT070

## Liquid Cooled Gas Engine Generator Sets

Standby Power Rating

70 kW 60 Hz



### GENERAC 3.9L ENGINE

Naturally Aspirated  
Gaseous Fueled

## 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 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>  
POWER SYSTEMS, INC.

# 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 .....	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
- 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
- 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 .....	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 .....	2170
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 .....	11" - 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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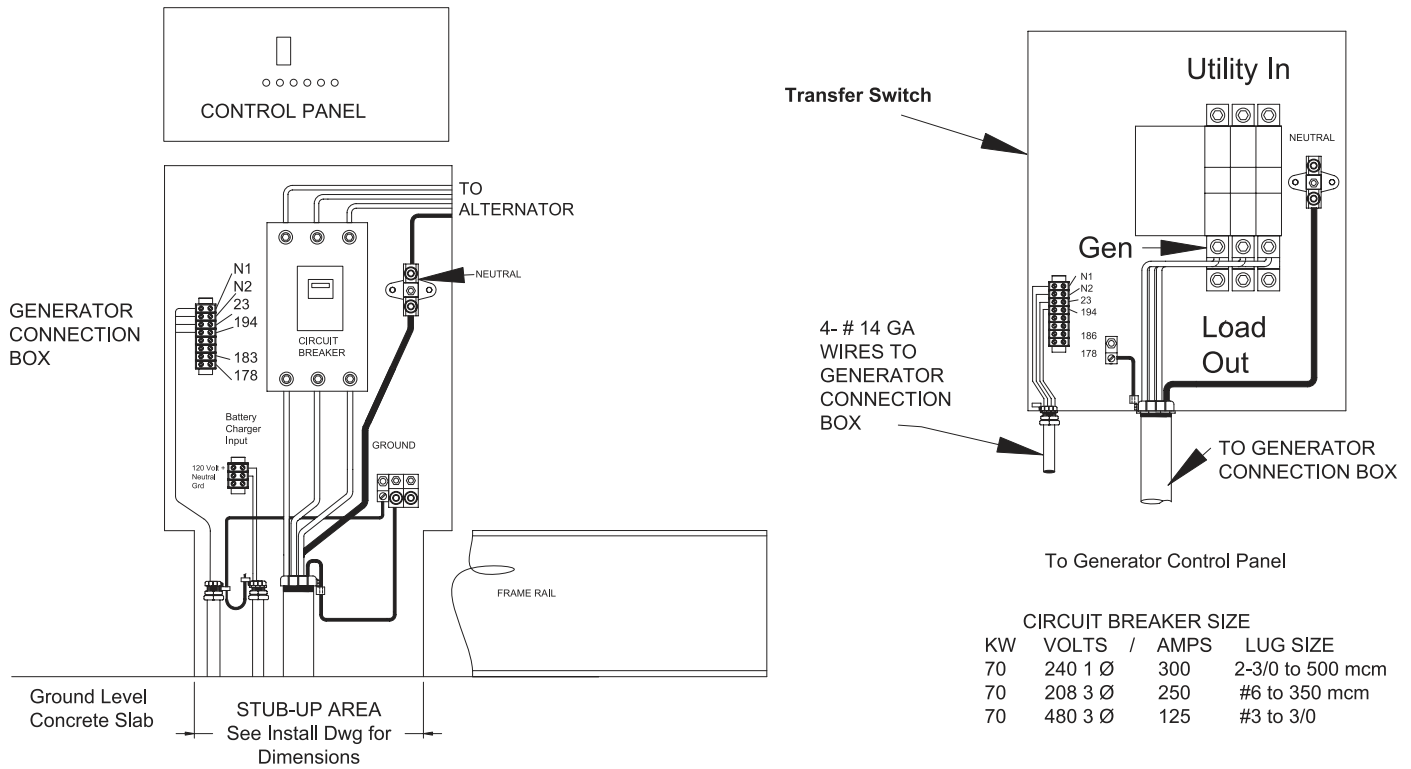
## OPERATING DATA

		<b>QT070</b>		
<b>KW RATING</b>		70		
<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		70	292	350
120/208V, 3-phase, 0.8 pf		70	243	250
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 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		130	1.42	52
25% of rated load		280	3.06	111
50% of rated load		530	5.78	210
75% of rated load		750	8.18	298
100% of rated load		1104	12.05	438
<b>ENGINE COOLING</b>				
Air flow (inlet air including alternator and combustion air)	ft <sup>3</sup> /min.		4,800	
System coolant capacity	US gal.		3.0	
Heat rejection to coolant	BTU/hr.		309,000	
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			61	
Full load at 7 meters			75	
<b>EXHAUST</b>				
Exhaust flow at rated output 60 Hz	cfm		752	
Exhaust temp. at muffler outlet	°F		1,174	
<b>ENGINE PARAMETERS</b>				
Rated synchronous RPM	60 Hz		3600	
HP at rated KW	60 Hz		123.6	
<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.

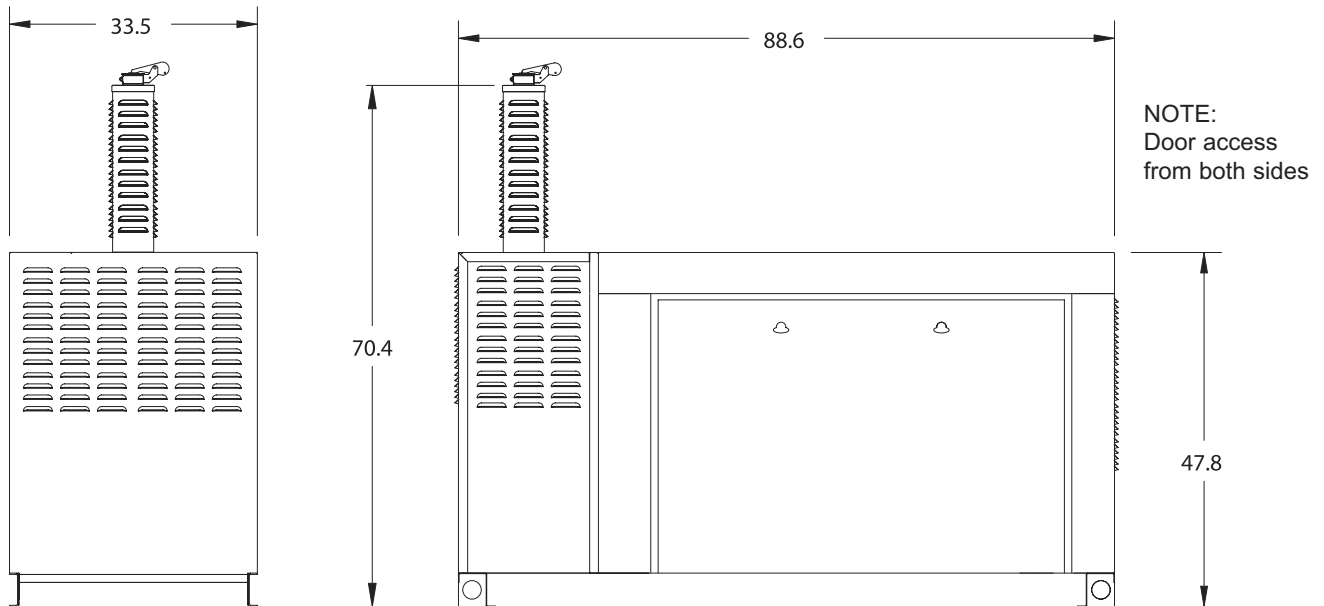
# INTERCONNECTIONS

QT070



Installation Drawing Ref. No. 0F6288

# INSTALLATION LAYOUT



**GENERAC**® POWER SYSTEMS, INC. • P.O. BOX 8 • WAUKESHA, WI 53187  
262/544-4811 • FAX 262/544-4851