

QT027

Liquid Cooled Gas Engine Generator Sets

Standby Power Rating

27 kVA 50 Hz - 3-phase

21.6 kVA 50 Hz - 1-phase



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

QT027

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).....	21.6 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

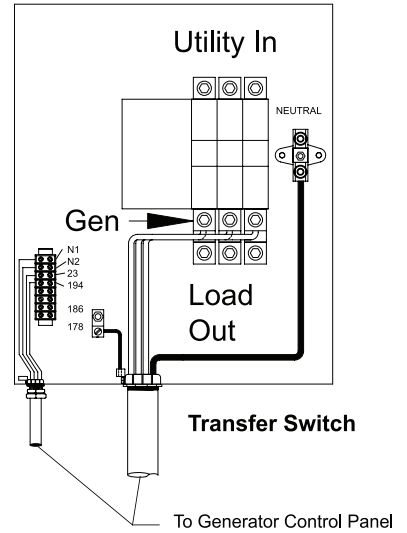
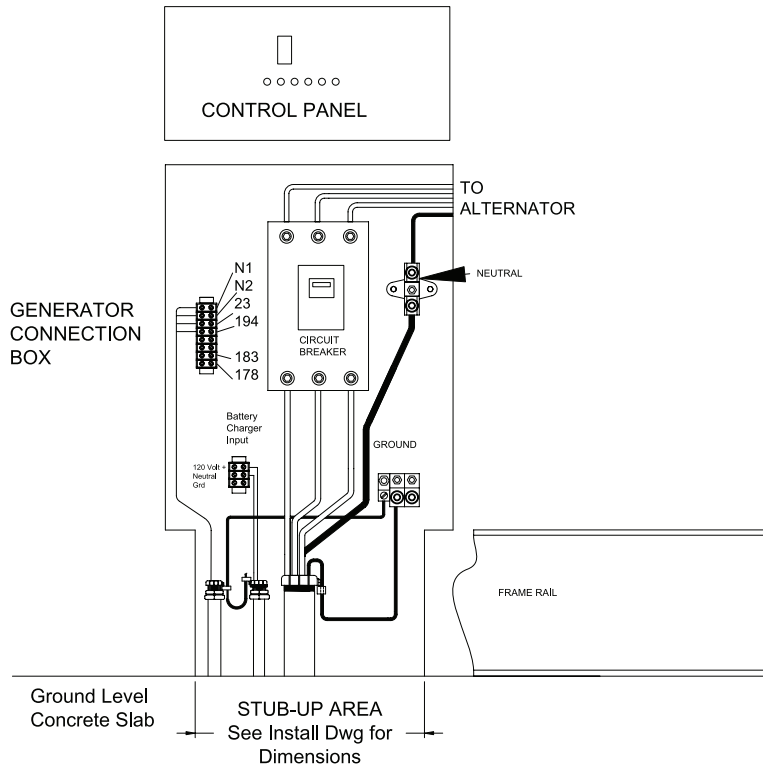
OPERATING DATA

KW RATING	27				
ENGINE SIZE	2.4 Liter Inline 4				
GENERATOR OUTPUT VOLTAGE/KW - 50Hz	kVA Nat. Gas	AMP	kVA LPG	AMP	CB Size
110/220V, 1-phase, 1.0 pf	20	90	21.6	98	125
110/220V, 3-phase, 0.8 pf	25	65	27	70	80
220/380V, 3-phase, 0.8 pf	25	38	27	41	50
GENERATOR LOCKED ROTOR KVA AVAILABLE @ VOLTAGE DIP OF 35%					
Single phase or 220 3-phase	50				
380 3-phase	67				
ENGINE FUEL CONSUMPTION	Natural Gas		Propane		
	(ft ³ /hr.)	(M ³ /hr.)	(gal/hr.)	(liters/hr.)	(M ³ /hr.)
25% of rated load	90	2.55	0.99	3.75	1.02
50% of rated load	164	4.65	1.81	6.84	1.86
75% of rated load	239	6.77	2.63	9.97	2.71
100% of rated load	299	8.47	3.30	12.47	3.39
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.	100,000				
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	75				
EXHAUST					
Exhaust flow at rated output 50 Hz cfm	110				
Exhaust temp. at muffler outlet °F	885				
ENGINE PARAMETERS					
Rated synchronous RPM 50 Hz	1500				
HP at rated kW 50 Hz	35				
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				183
	3% for every 1000 ft. above - ft.				600
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

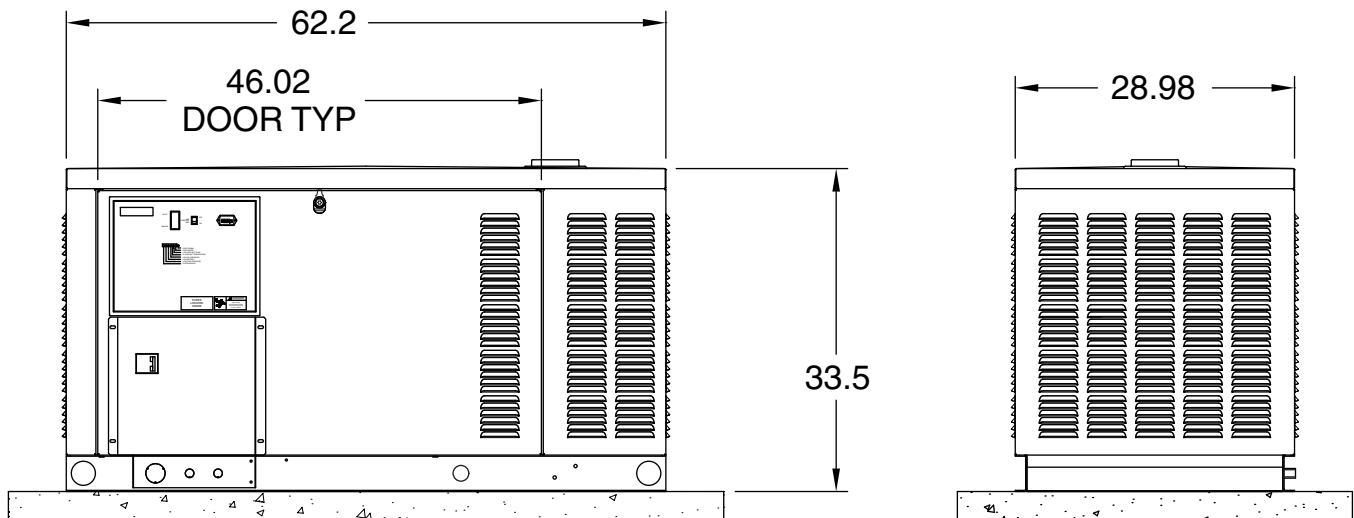
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CIRCUIT BREAKER SIZE			
kVA	VOLTS	AMPS	LUG SIZE
27	240 1 Ø	125	#2 to 1/0
27	240 3 Ø	80	#4 to 1/0
27	380 3 Ø	50	#4 to 1/0

Installation Drawing Ref. No. 0G0325

INSTALLATION LAYOUT



SEE INSTALL DWG 0G9370 FOR DETAILS

FRONT VIEW

WEIGHT: 843 lbs.



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