

## Standby Generators

### Standby Generators Liquid-Cooled Gas Engine

#### INCLUDES:

- Two Line LCD Tri-Lingual Digital Nexus™ Controller
- Isochronous Electronic Governor
- Sound Attenuated Enclosure
- Closed Coolant Recovery System
- Smart Battery Charger
- UV/Ozone Resistant Hoses
- ±1% Voltage Regulation
- Natural Gas or LP Operation
- 2 Year Limited Warranty
- UL 2200 Listed

#### Standby Power Rating

- Model QT070 (Aluminum - Bisque) - 70 kW 60 Hz
- Model QT080 (Aluminum - Bisque) - 80 kW 60 Hz
- Model QT100 (Aluminum - Bisque) - 100 kW 60 Hz
- Model QT130 (Aluminum - Bisque) - 130 kW 60 Hz
- Model QT150 (Aluminum - Bisque) - 150 kW 60 Hz



Meets EPA Emission Regulations  
70, 100, 130 & 150 kW meet CA/MA emissions requirement with optional catalyst  
80 kW not for sale in CA/MA

## FEATURES

- **INNOVATIVE DESIGN & PROTOTYPE TESTING** are key components of GENERAC'S success in "IMPROVING POWER BY DESIGN." But it doesn't stop there. Total commitment to component testing, reliability testing, environmental testing, destruction and life testing, plus testing to applicable CSA, NEMA, EGSA, and other standards, allows you to choose GENERAC POWER SYSTEMS with the confidence that these systems will provide superior performance.
- **TEST CRITERIA:**
  - ✓ PROTOTYPE TESTED
  - ✓ SYSTEM TORSIONAL TESTED
  - ✓ NEMA MG1-22 EVALUATION
  - ✓ MOTOR STARTING ABILITY
- **SOLID-STATE, FREQUENCY COMPENSATED VOLTAGE REGULATION.** This state-of-the-art power maximizing regulation system is standard on all Generac models. It provides optimized FAST RESPONSE to changing load conditions and MAXIMUM MOTOR STARTING CAPABILITY by electronically torque-matching the surge loads to the engine. Digital voltage regulation at ±1%.
- **SINGLE SOURCE SERVICE RESPONSE** from Generac's extensive dealer network provides parts and service know-how for the entire unit, from the engine to the smallest electronic component.
- **GENERAC TRANSFER SWITCHES.** Long life and reliability are synonymous with GENERAC POWER SYSTEMS. One reason for this confidence is that the GENERAC product line includes its own transfer systems and controls for total system compatibility.

## 70 • 80 • 100 • 130 • 150 kW

## application &amp; engineering data

## GENERATOR SPECIFICATIONS

Type	Synchronous
Rotor Insulation Class	H
Stator Insulation Class	H
Telephone Interference Factor (TIF)	<50
Alternator Output Leads 1-Phase	4 wire
Alternator Output Leads 3-Phase	6 wire (70, 80 & 150 kW) or 12 wire (100 & 130 kW)
Bearings	Sealed Ball
Coupling	Flexible Disc (70, 80 & 150 kW) or Gear Drive (100 & 130 kW)
Excitation System	Brushless

## VOLTAGE REGULATION

Type	Electronic
Sensing	Single Phase
Regulation	± 1%

## GOVERNOR SPECIFICATIONS

Type	Electronic
Frequency Regulation	Isochronous
Steady State Regulation	± 0.25%

## ELECTRICAL SYSTEM

Battery Charge Alternator	12 Volt 30 Amp
Static Battery Charger	2 Amp
Recommended Battery	Group 24F, 525 CCA (70, 80 & 150 kW) or Group 27F, 700 CCA (100 & 130 kW)
System Voltage	12 Volts

## GENERATOR FEATURES

Revolving field heavy duty generator  
Directly connected to the engine  
Operating temperature rise 120 °C above a 40 °C ambient  
Class H insulation is rated at 150 °C rise at 25 °C ambient  
All models fully prototyped tested

## ENCLOSURE FEATURES

Aluminum weather protective enclosure	Ensures protection against mother nature. Electrostatically applied textured epoxy paint for added durability.
Enclosed critical grade muffler	Quiet, critical grade muffler is mounted inside the unit to prevent injuries.
Small, compact, attractive	Makes for an easy, eye appealing installation.
SAE	Sound attenuated enclosure ensures quiet operation.

## ENGINE SPECIFICATIONS: 80 kW

Make	Generac
Model	V-Type
Cylinders	8
Displacement (Liters)	4.6
Bore (in/mm)	3.55/90.2
Stroke (in/mm)	3.54/89.9
Compression Ratio	9.4:1
Intake Air System	Naturally Aspirated
Lifter Type	Hydraulic

## ENGINE SPECIFICATIONS: 70, 100, 130 &amp; 150 kW

Make	Generac
Model	V-Type
Cylinders	10
Displacement (Liters)	6.8
Bore (in/mm)	3.55/90.2
Stroke (in/mm)	4.17/105.9
Compression Ratio	9:1
Intake Air System	Naturally Aspirated
Lifter Type	Hydraulic

## ENGINE LUBRICATION SYSTEM

Oil Pump Type	Gear
Oil Filter Type	Full flow spin-on cartridge
Crankcase Capacity (qt/l)	5/4.7 (70, 100, 130 & 150 kW) or 6/5.7 (80 kW)

## ENGINE COOLING SYSTEM

Type	Closed
Water Pump	Belt driven
Fan Speed (rpm)	2300 - 70 kW 1600 - 80 kW 1670 - 100 kW 1950 - 130 kW 2200 - 150 kW
Fan Diameter (in/mm)	22/558.8 (70 kW) or 26/660.4 (80, 100, 130 & 150 kW)
Fan Mode	Pusher (70 kW) or Puller (80, 100, 130 & 150 kW)

## 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" water column/21-26 mm HG

## 70 • 80 • 100 • 130 • 150 kW

## operating data

### GENERATOR OUTPUT VOLTAGE/kW - 60 Hz

		kW LPG	Amp LPG	kW Nat. Gas	Amp Nat. Gas	CB Size (Both)
QT070	120/240 V, 1Ø, 1.0 pf	67	292	64	267	300
	120/208 V, 3Ø, 0.8 pf	70	243	67	232	300
	120/240 V, 3Ø, 0.8 pf	70	211	67	201	250
	277/480 V, 3Ø, 0.8 pf	70	105	67	101	125
QT080	120/240 V, 1Ø, 1.0 pf	77	333	77	333	400
	120/208 V, 3Ø, 0.8 pf	80	278	80	278	300
	120/240 V, 3Ø, 0.8 pf	80	241	80	240	300
	277/480 V, 3Ø, 0.8 pf	80	120	80	120	150
QT100	120/240 V, 1Ø, 1.0 pf	100	417	89	371	500
	120/208 V, 3Ø, 0.8 pf	100	347	94	326	400
	120/240 V, 3Ø, 0.8 pf	100	301	94	283	350
	277/480 V, 3Ø, 0.8 pf	100	150	94	141	175
QT130	120/240 V, 1Ø, 1.0 pf	130	542	117	488	600
	120/208 V, 3Ø, 0.8 pf	130	451	122	423	500
	120/240 V, 3Ø, 0.8 pf	130	391	122	367	450
	277/480 V, 3Ø, 0.8 pf	130	195	122	183	225
QT150	120/240 V, 1Ø, 1.0 pf	144	625	136	567	700
	120/208 V, 3Ø, 0.8 pf	150	520	142	493	600
	120/240 V, 3Ø, 0.8 pf	150	451	142	427	500
	277/480 V, 3Ø, 0.8 pf	150	225	142	214	250

### SURGE CAPACITY IN AMPS

		Voltage Dip @ < .4 pf	
		15%	30%
QT070	120/240 V, 1Ø	129	356
	120/208 V, 3Ø	194	471
	120/240 V, 3Ø	168	408
	277/480 V, 3Ø	83	201
QT080	120/240 V, 1Ø	174	435
	120/208 V, 3Ø	186	466
	120/240 V, 3Ø	161	404
	277/480 V, 3Ø	70	175
QT100	120/240 V, 1Ø	150	413
	120/208 V, 3Ø	186	452
	120/240 V, 3Ø	161	392
	277/480 V, 3Ø	107	261
QT130	120/240 V, 1Ø	236	648
	120/208 V, 3Ø	364	885
	120/240 V, 3Ø	315	767
	277/480 V, 3Ø	161	390
QT150	120/240 V, 1Ø	486	1214
	120/208 V, 3Ø	534	1334
	120/240 V, 3Ø	463	1156
	277/480 V, 3Ø	250	624

### ENGINE FUEL CONSUMPTION

		Natural Gas		Propane	
		(ft³/hr)	(m³/hr)	(gal/hr)	(l/hr)
QT070	Exercise cycle	110	3.1	1.2	4.6
	25% of rated load	260	7.4	2.85	10.8
	50% of rated load	500	14.2	5.46	20.8
	75% of rated load	696	19.8	7.62	29.1
	100% of rated load	1020	29	11.17	42.6
QT080	Exercise cycle	131	3.7	1.45	5.5
	25% of rated load	312	8.9	3.45	13.1
	50% of rated load	600	17.1	6.64	25
	75% of rated load	835	23.7	9.25	34.9
	100% of rated load	1154	32.8	12.78	48.2
QT100	Exercise cycle	130	3.7	1.4	5.4
	25% of rated load	371	10.5	4.1	15.5
	50% of rated load	713	20.3	7.9	29.8
	75% of rated load	991	28.2	11	41.5
	100% of rated load	1260	35.8	13.9	52.6
QT130	Exercise cycle	135	3.8	1.4	5.7
	25% of rated load	482	13.7	5.3	20
	50% of rated load	927	26.3	10.3	38.7
	75% of rated load	1292	36.7	14.3	54
	100% of rated load	1786	50.8	19.8	74.6
QT150	Exercise cycle	155	4.4	1.7	6.5
	25% of rated load	556	15.8	6.09	23.2
	50% of rated load	1070	30.4	11.72	44.7
	75% of rated load	1491	42.4	16.33	62.3
	100% of rated load	2061	58.6	22.57	86.1

Note: **Fuel pipe must be sized for full load.**

For Btu content, multiply gal/hr x 90950 (LP) or ft³/hr x 1000 (NG).

For megajoule content, multiply l/hr x 25.35 (LP) or m³/hr x 37.26 (NG).

Refer to "Emissions Data Sheets" for maximum fuel flow for EPA and SCAQMD permitting purposes.

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.

**70 • 80 • 100 • 130 • 150 kW****operating data****ENGINE COOLING**

	70 kW	80 kW	100 kW	130 kW	150 kW
Air flow (inlet air including alternator and combustion air in ft <sup>3</sup> /min)	5200/147.2	5300/150.1	5500/155.7	6450/182.6	7800/220.9
System coolant capacity (gal/liters)	4.5/17	4/15.1	4.5/17	4.5/17	4.5/17
Heat rejection to coolant (BTU/hr)	287,000/302.8	316,000/333.4	342,000/360.8	496,000/523.3	568,000/599.3
Maximum operation air temperature on radiator (°C/°F)	60/150				
Maximum ambient temperature (°C/°F)	50/140				

**COMBUSTION REQUIREMENTS**

Flow at rated power (cfm/cmm)	205/5.8	250/7.1	262/7.4	336/9.5	410/11.6
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**SOUND EMISSIONS**

Sound output in dB(A) at 23 ft (7 m) with generator in exercise mode*	67	64	61	65	66
Sound output in dB(A) at 23 ft (7 m) with generator operating at normal load*	72	74	72	75	79

\*Sound levels are taken from the front of the generator. Sound levels taken from other sides of the generator may be higher depending on installation parameters.

**EXHAUST**

Exhaust flow at rated output (cfm/cmm)	557/15.8	720/20.4	888/25.1	1119/31.7	1535/43.5
Exhaust temperature at muffler outlet (°C/°F)	477/890	449/840	516/960	521/970	593/1100

**ENGINE PARAMETERS**

Rated Synchronous rpm	1800	3600	2300	2970	3600
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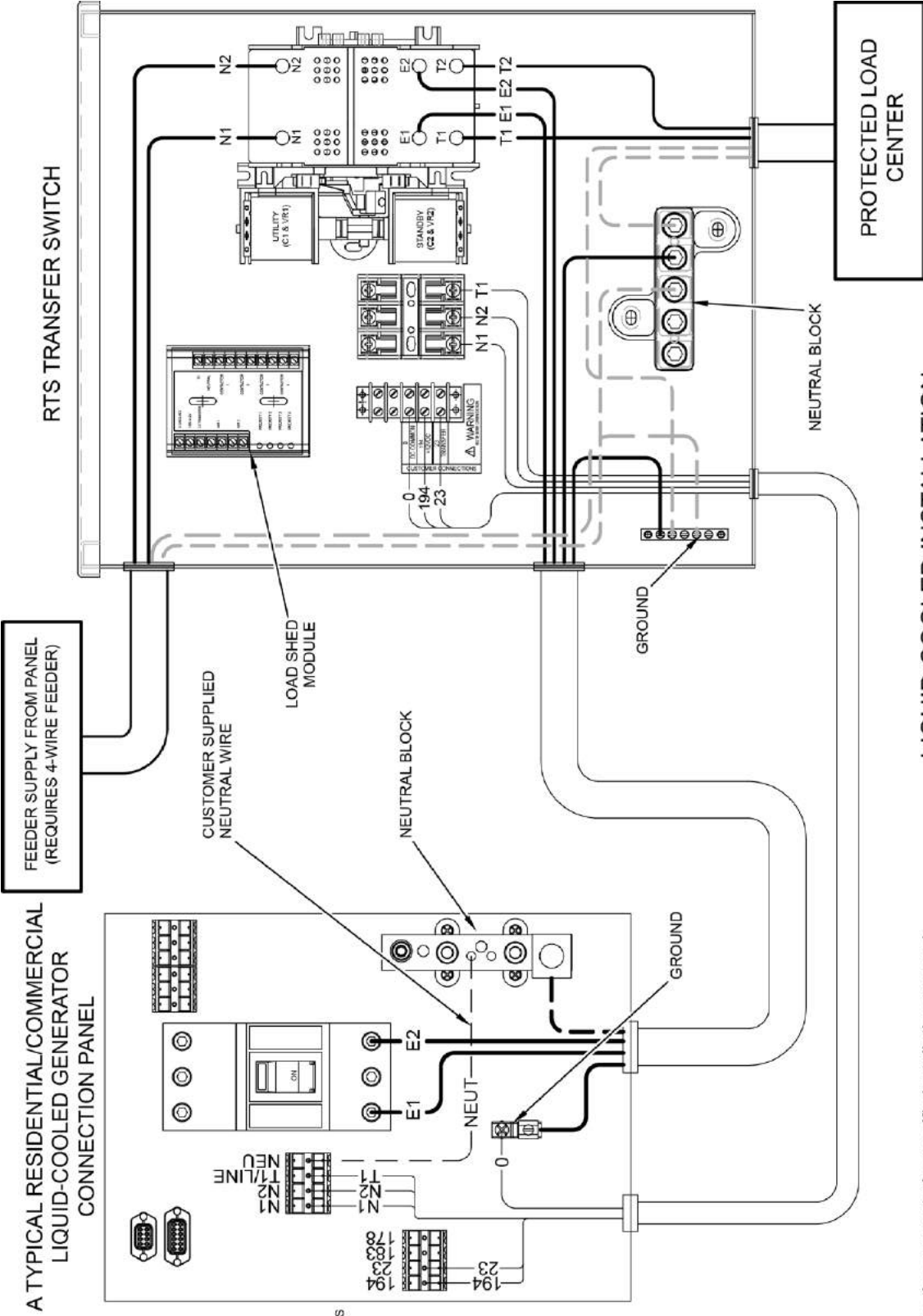
**POWER ADJUSTMENT FOR AMBIENT CONDITIONS**

Temperature Deration .....	3% for every 10 °C above 25 °C or 1.65% for every 10 °F above 77 °F
Altitude Deration (70,100,130 & 150) .....	1% for every 100 m above 183 m or 3% for every 1000 ft above 600 ft
Altitude Deration (80 kW) .....	1% for every 100 m above 915 m or 3% for every 1000 ft above 3000 ft

**CONTROLLER FEATURES**

2-Line Plain Text LCD Display .....	Simple user interface for ease of operation.
Mode Switch: Auto .....	Automatic Start on Utility failure. 7 day exerciser
Off .....	Stops unit. Power is removed. Control and charger still operate.
Manual .....	Start with starter control, unit stays on. If utility fails, transfer to load takes place.
Programmable start delay between 10-30 seconds .....	Standard
Engine Start Sequence .....	Cyclic cranking: 16 sec on, 7 rest (90 sec maximum duration)
Engine Warm-up .....	5 sec
Engine Cool-Down .....	1 min
Starter Lock-out .....	Starter cannot re-engage until 5 sec after engine has stopped.
Smart Battery Charger .....	Standard
Automatic Voltage Regulation with Over and Under Voltage Protection .....	Standard
Automatic Low Oil Pressure Shutdown .....	Standard
Overspeed Shutdown .....	Standard, 72 Hz
High Temperature Shutdown .....	Standard
Overcrank Protection .....	Standard
Safety Fused .....	Standard
Failure to Transfer Protection .....	Standard
Low Battery Protection .....	Standard
50 Event Run Log .....	Standard
Future Set Capable Exerciser .....	Standard
Incorrect Wiring Protection .....	Standard
Internal Fault Protection .....	Standard
Common External Fault Capability .....	Standard
Governor Failure Protection .....	Standard

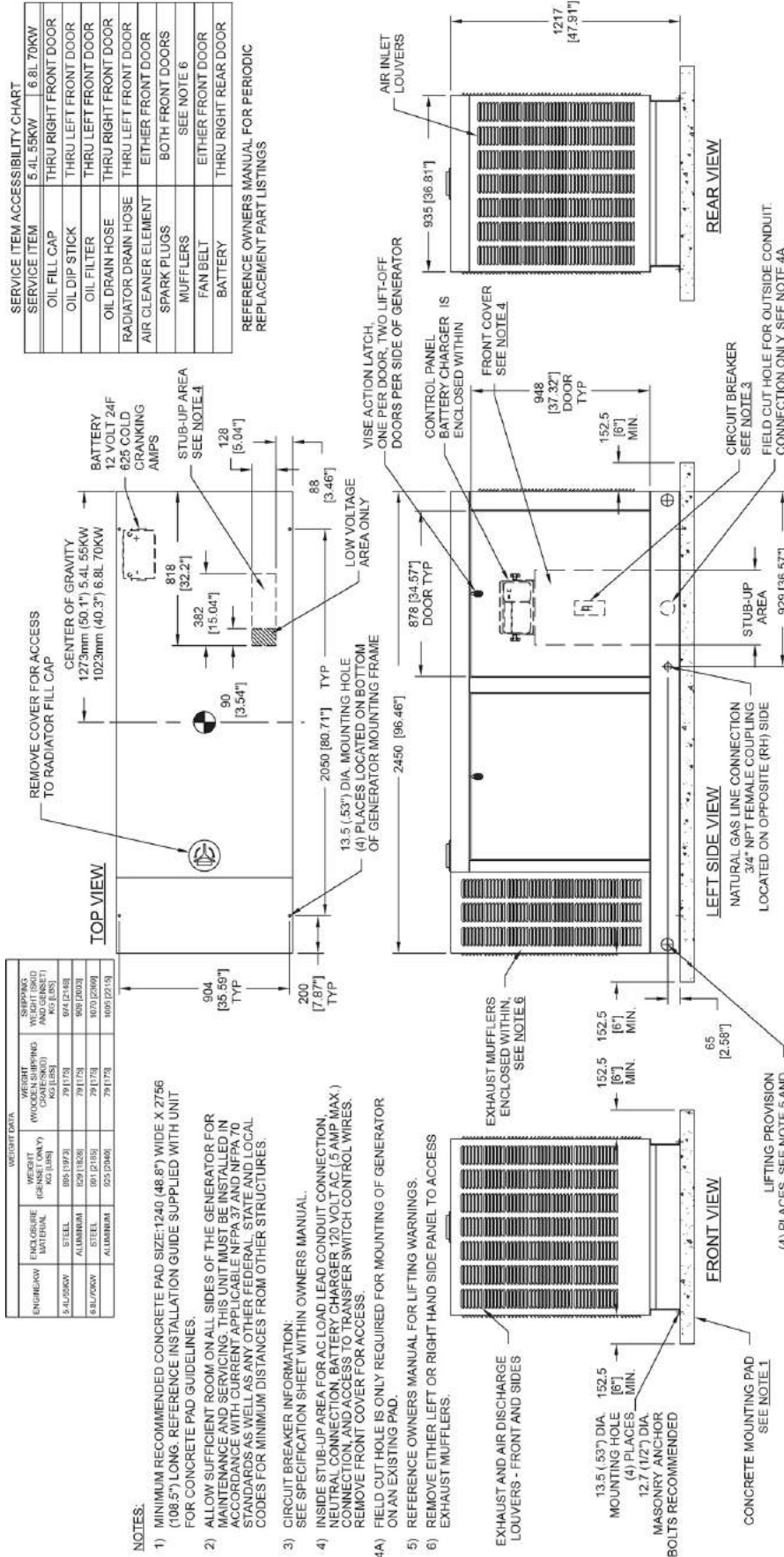
Model #	Product	Description
005632-0 - 70, 80 & 150 kW 005633-0 - 100 & 130 kW	Cold Weather Kit	If the temperature regularly falls below 32 °F (0 °C), install a cold weather kit to maintain optimal battery temperature. Kit consists of battery warmer with thermostat built into the wrap.
005620-0 - 70, 100 & 130 kW 005619-0 - 80 kW 005667-0 - 150 kW	Extreme Cold Weather Kit	Recommended where the temperature regularly falls below 32 °F (0 °C) for extended periods of time. For liquid cooled units only.
005651-0	Base Plug Kit	Add base plugs to the base of the generator to keep out debris.
005703-0	Paint Kit	If the generator enclosure is scratched or damaged, it is important to touch-up the paint to protect from future corrosion. The paint kit includes the necessary paint to properly maintain or touch-up a generator enclosure.
005660-0 - 70, 100, 130 & 150 kW 005985-0 - 80 kW	Scheduled Maintenance Kit	The Liquid-Cooled Scheduled Maintenance Kits offer all the hardware necessary to perform complete maintenance on Generac liquid-cooled generators.
005928-0	Wireless Remote	Completely wireless and battery powered, Generac's wireless remote monitor provides you with instant status information without ever leaving the house.
005951-0	Advanced Wireless Remote	Remotely control generator functions with the advanced model's LCD display. In addition to remote testing of the generator, set the exercise cycle and maintenance interval reminders.
006199-0	PMM Starter Kit	The PMM Starter Kit consists of a 24 VAC, field installed transformer that enables the use of the 24 VAC Power Management Modules (PMMs) and one PMM. The standard controller (without starter kit) can control two HVAC loads with no additional hardware. Not compatible with pre-wired switches.
006186-0	Power Management Module (50 Amps)	Power Management Modules are used in conjunction with the Smart Switch to increase its power management capabilities. It gives the Smart Switch additional power management flexibility not found in any other transfer switch. Not compatible with pre-wired switches. Note: PMM Starter Kit required.
006463-1	Mobile Link™	Generac's Mobile Link allows you to check the status of your generator from anywhere that you have access to an Internet connection from a PC or with any smart device. You will even be notified when a change in the generator's status occurs via e-mail or text message. Note: Harness Adapter Kit required.
006478-0	Harness Adapter Kit	The Harness Adapter Kit is required to make liquid-cooled units compatible with Mobile Link™.



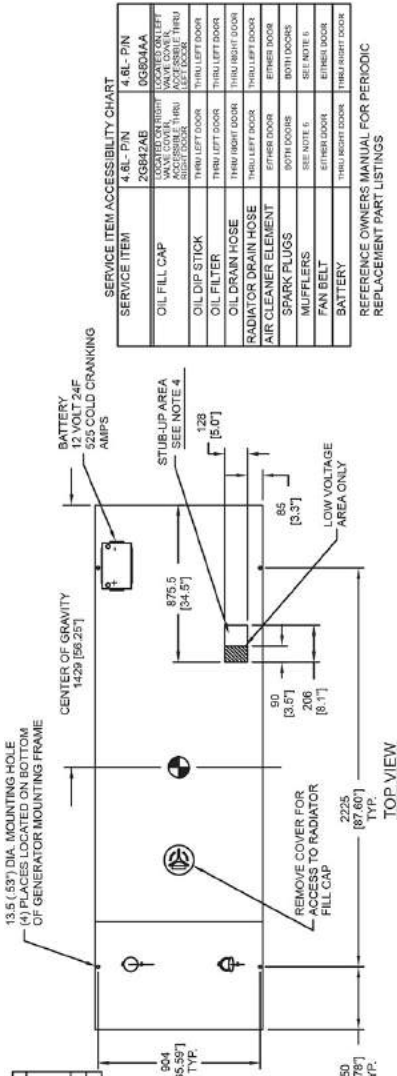
**LIQUID COOLED INSTALLATION**

**Note:** Use the generator's specific installation manual and wiring diagrams to verify generator wiring connections, as they may differ slightly from illustration.





80 kW



- NOTES:**
- 1) MINIMUM RECOMMENDED CONCRETE PAD SIZE: 124" (49") WIDE X 323" (127.25") LONG. REFERENCE INSTALLATION GUIDE SUPPLIED WITH UNIT FOR CONCRETE PAD GUIDELINES.
  - 2) ALLOW SUFFICIENT ROOM ON ALL SIDES OF GENERATOR FOR MAINTENANCE AND SERVICING. THIS UNIT MUST BE INSTALLED ON A LEVEL, UNCOMBUSTIBLE SURFACE. MAINTAIN MINIMUM CLEARANCE STATE AND LOCAL CODES FOR MINIMUM DISTANCES FROM OTHER STRUCTURES.
  - 3) CIRCUIT BREAKER INFORMATION: SEE SPECIFICATION SHEET WITHIN OWNERS MANUAL.
  - 4) INSIDE STUB-UP AREA FOR AC LEAD CONDUIT CONNECTION, NEUTRAL CONNECTION, BATTERY CHARGER (30 VOLT AC (0-AMP MAX.) CONNECTION), AND ACCESS TO TRANSFER SWITCH CONTROL WIRES. REMOVE FRONT COVER FOR ACCESS.
  - 4A) FIELD CUT HOLE IS ONLY REQUIRED FOR MOUNTING OF GENERATOR ON AN EXISTING PAD.
  - 5) REFERENCE OWNERS MANUAL FOR LIFTING WARNINGS.
  - 6) REMOVE EITHER LEFT OR RIGHT HAND SIDE PANEL TO ACCESS EXHAUST MUFFLERS AND PAN BELT.

