

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
- 1 Year Limited Warranty

Standby Power Rating

- Model QT02224MNAX (Aluminum - Bisque) - 17kVa, 50Hz, 1Ø
- Model QT02724MNAX (Aluminum - Bisque) - 19.5kVA, 50Hz, 1Ø
- Model QT02724RNAX (Aluminum - Bisque) - 25kVA, 50Hz, 3Ø



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.

17 • 19.5 • 25kVA**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	4 wire
Bearings	Sealed Ball
Coupling	Flexible Disc
Excitation System	Direct

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	12V 30 Amp
Static Battery Charger	2 Amp
Recommended Battery	Group 26, 525CCA
System Voltage	12 Volts

GENERATOR FEATURES

<p>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</p>

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

Make	Generac
Model	In line
Cylinders	4
Displacement (Liters)	2.4
Bore (in./mm)	3.41/86.5
Stroke (in./mm)	3.94/100
Compression Ratio	9.5:1
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 (quarts/liters)	4/3.8

ENGINE COOLING SYSTEM

Type	Closed
Water Pump	Belt driven
Fan Speed (RPM)	1980 - 17kVA 1650 - 19.5 & 25kVA
Fan Diameter (in./mm)	17.75/450.9
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

17 • 19.5 • 25kVA

GENERATOR OUTPUT VOLTAGE/kVA - 50Hz

		kVA	Amp	CB Size
17kVA	110/220V, 1Ø, 1.0 pf	17	77	90
19.5kVA	110/220V, 1Ø, 1.0 pf	19.5	89	100
25kVA	231/400V, 3Ø, 0.8 pf	25	36	40

ENGINE FUEL CONSUMPTION

		Natural Gas		Propane	
		(ft ³ /hr.)	(m ³ /hr.)	(gal/hr.)	(l/hr.)
17kVA	25% of rated load	83	2.36	0.92	3.47
	50% of rated load	158	4.48	1.74	6.6
	75% of rated load	212	6.01	2.34	8.86
	100% of rated load	263	7.45	2.9	10.98
19.5kVA	25% of rated load	90	2.55	0.99	3.75
	50% of rated load	164	4.65	1.81	6.84
	75% of rated load	239	6.77	2.63	9.97
	100% of rated load	299	8.47	3.3	12.47
25kVA	25% of rated load	90	2.55	0.99	3.75
	50% of rated load	164	4.65	1.81	6.84
	75% of rated load	239	6.77	2.63	9.97
	100% of rated load	299	8.47	3.3	12.47

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

For Btu content, multiply ft³/hr x 2520 (LP) or ft³/hr x 1000 (NG)

For megajoule content, multiple m³/hr x 93.89 (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.

17 • 19.5 • 25kVA

operating data

ENGINE COOLING

	17kVA	19.5kVA	25kVA
Air flow (inlet air including alternator and combustion air in cfm/cmm.)	2000/56.6		
System coolant capacity (gal./liters)	2.5/9.5		
Heat rejection to coolant (BTU per hr./MJ per hr.)	83,000/87.6	100,000/105.5	100,000/105.5
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)	57/1.6
-------------------------------	--------

SOUND EMISSIONS

Sound output in dB(A) at 23 ft. (7m) with generator operating at normal load*	62	61	61
---	----	----	----

*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)	140/4	110/3.1	110/3.1
Exhaust temperature at muffler outlet (°C/°F)	468/875	474/885	474/885

ENGINE PARAMETERS

Rated Synchronous RPM	1500
-----------------------	------

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 (17kVA)	1% for every 100m above 915m or 3% for every 1000ft. above 3000ft.
Altitude Deration (19.5 & 25kVA)	1% for every 100m above 183m or 3% for every 1000ft. above 600ft.

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, 72Hz
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
005630-0	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.
005616-0	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.
5656	Scheduled Maintenance Kit	The Liquid-Cooled Scheduled Maintenance Kits offer all the hardware necessary to perform complete maintenance on Generac liquid-cooled generators.

