



GENERAC® STANDBY GENERATORS

22 kVA

Liquid-Cooled Engine Generator Sets

Standby Power Rating

Model QT022 (Gray) - 22 kVA 50Hz

INCLUDES:

- Generac Naturally Aspirated Gaseous Fueled 2.4L Engine
- Two Line LCD Tri-lingual Digital Nexus™ Controller
- Sound Attenuated Enclosure
- Isochronous Electronic Governor
- Closed Coolant Recovery System
- Smart Battery Charger
- UV/Ozone Resistant Hoses
- ±1% Voltage Regulation
- Natural Gas or LP Operation
- 1 Year Limited Warranty



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. An unequalled ±1% voltage regulation.
- **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.



GENERATOR SPECIFICATIONS

| | |
|-------------------------------------|---------------|
| TYPE | Synchronous |
| ROTOR INSULATION | Class H |
| STATOR INSULATION | Class H |
| TELEPHONE INTERFERENCE FACTOR (TIF) | < 50 |
| ALTERNATOR OUTPUT LEADS 3 PHASE | 4 wire |
| BEARINGS | Sealed Ball |
| COUPLING | Flexible Disc |
| LOAD CAPACITY (STANDBY RATING) | 22 kW |
| EXCITATION SYSTEM | Direct |

VOLTAGE REGULATION

| | |
|------------|--------------|
| TYPE | Electronic |
| SENSING | Single Phase |
| REGULATION | ± 1% |

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

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 | 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

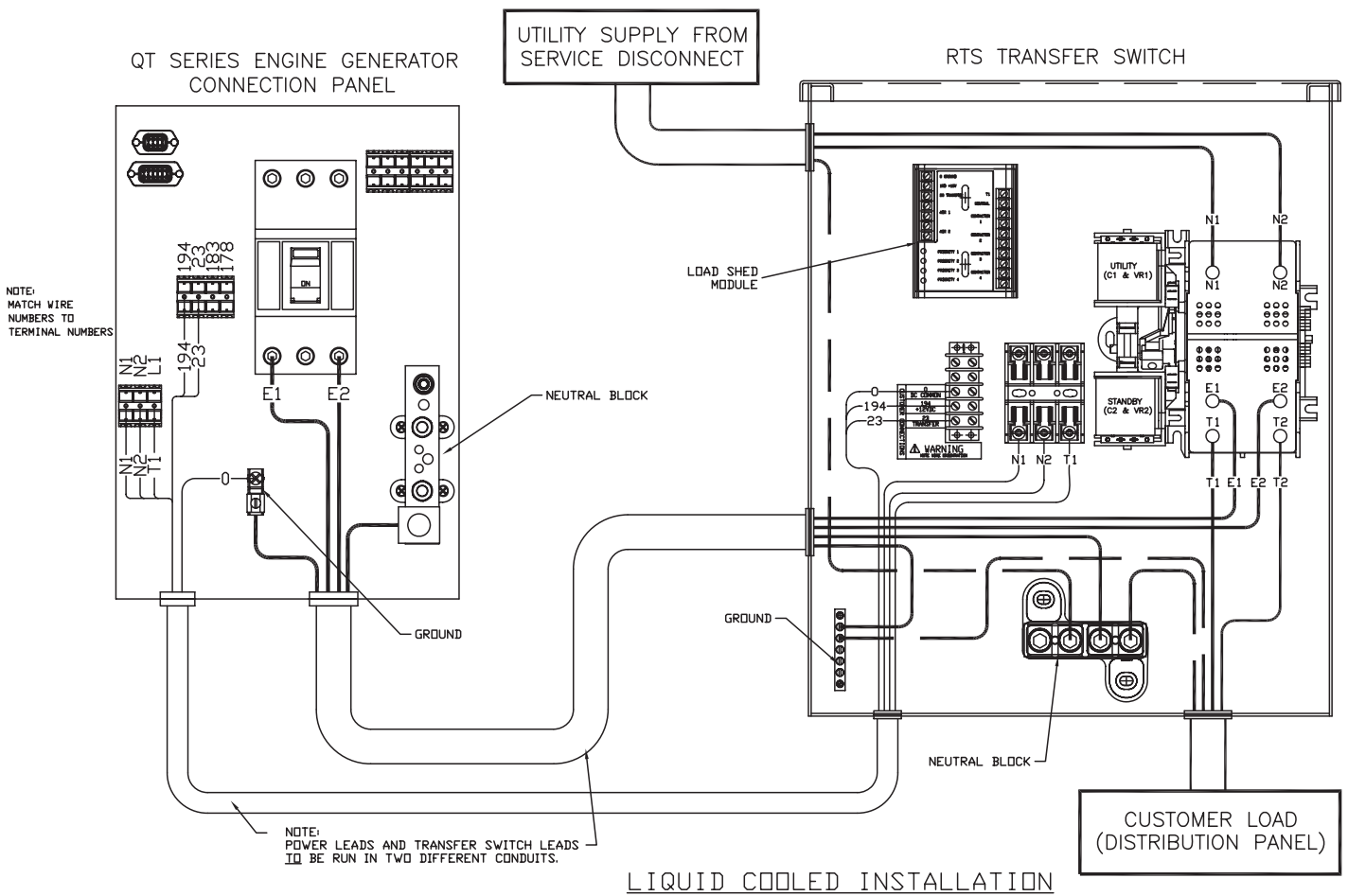
| | |
|--------------------------|----------------------------|
| FUEL TYPE | Natural gas, propane vapor |
| CARBURETOR | Down Draft |
| SECONDARY FUEL REGULATOR | Standard |
| FUEL SHUT OFF SOLENOID | Standard |
| OPERATING FUEL PRESSURE | 5" - 14" H ₂ O |

ELECTRICAL SYSTEM

| | |
|---------------------------|------------------|
| BATTERY CHARGE ALTERNATOR | 12V 30 Amp |
| STATIC BATTERY CHARGER | 2 Amp |
| RECOMMENDED BATTERY | Group 26, 525CCA |
| SYSTEM VOLTAGE | 12 Volts |

| OPERATING DATA | | | | | |
|--|-----------------------------------|-----------------------|-----------|--------------|-----------------------|
| KVA RATING | 22 | | | | |
| ENGINE SIZE | 2.4 Liter Inline 4 | | | | |
| GENERATOR OUTPUT VOLTAGE/kVA - 50Hz | kVA | AMP | | CB Size | |
| 110/220V, 1-phase, 0.8 pf | 21.6 | 98 | | 125 | |
| 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 |
| For Btu content, multiply ft ³ /hr x 2520 (LP) or ft ³ /hr x 1000 (NG) | | | | | |
| 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 | | 61 | | | |
| 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 phase 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.



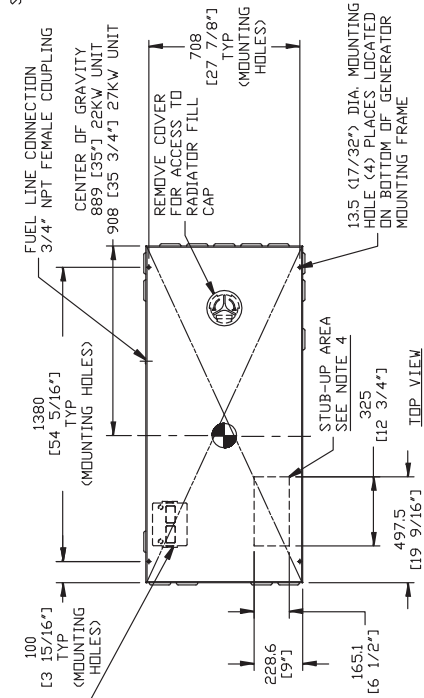
NEXUS™ CONTROL FEATURES

| | |
|---|--|
| 2-Line Plain Text LCD Display | Simple user interface for ease of operation |
| Mode Switch | Automatic Start on Utility failure. 7 day exerciser |
| -Auto | |
| -Off | Stops unit. Power is removed. Control and charger still operate. |
| -Manual/Test (start) | 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 seconds |
| Engine Cool-Down | 1 minute |
| 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 |

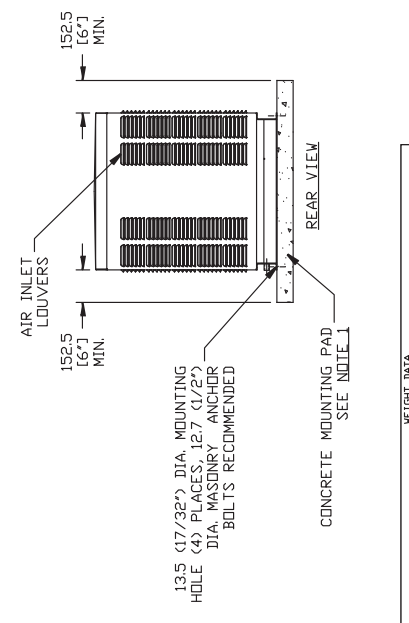
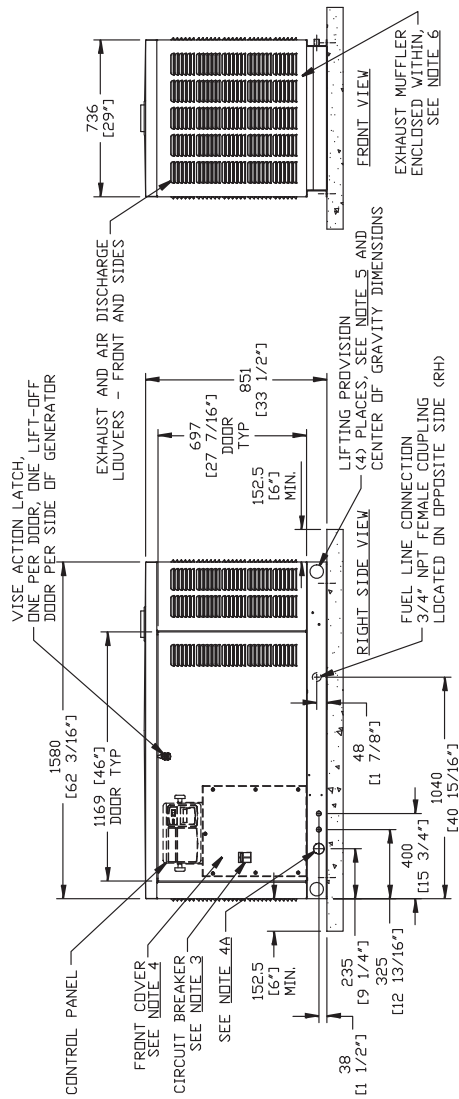
*Connections may vary, refer to the owner's manual for specific connection information.

| SERVICE ITEM | ACCESS |
|---------------------|-----------------|
| OIL FILL CAP | THRU RIGHT DOOR |
| OIL DIP STICK | THRU RIGHT DOOR |
| OIL FILTER | THRU RIGHT DOOR |
| OIL DRAIN HOSE | THRU LEFT DOOR |
| RADIATOR DRAIN HOSE | THRU LEFT DOOR |
| AIR CLEANER ELEMENT | THRU LEFT DOOR |
| SPARK PLUGS | THRU LEFT DOOR |
| MUFFLERS | SEE NOTE 6 |
| FAN BELT | THRU RIGHT DOOR |
| BATTERY | THRU LEFT DOOR |

REFERENCE OWNERS MANUAL FOR PERIODIC REPLACEMENT PART LISTINGS



- NOTES:**
- 1) MINIMUM RECOMMENDED CONCRETE PAD SIZE: 1041 (41.0") WIDE X 1892 (74 1/2") LONG. REFERENCE INSTALLATION GUIDE SUPPLIED WITH UNIT FOR CONCRETE PAD GUIDELINES.
 - 2) ALLOW SUFFICIENT ROOM ON ALL SIDES OF THE GENERATOR FOR MAINTENANCE AND SERVICING. THIS UNIT MUST BE INSTALLED IN ACCORDANCE WITH CURRENT APPLICABLE NFPA 37 AND NFPA 70 STANDARDS AS WELL AS ANY OTHER FEDERAL, 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 LOAD LEAD CONDUIT CONNECTION, NEUTRAL CONNECTION, BATTERY CHARGER 120 VOLT AC (0.5 AMP MAX.) CONNECTION, ACCESS TO TRANSFER SWITCH CONTROL WIRES, AND TRANSFER SWITCH CONNECTION (IF SO EQUIPPED). REMOVE FRONT COVER FOR ACCESS.
 - 4A) ONE 1-1/2" NEMA ELECTRICAL KNOCKOUT AND TWO 1/2" NEMA ELECTRICAL KNOCKOUTS PROVIDED FOR OUTSIDE AC LOAD CONDUIT CONNECTION, NEUTRAL CONNECTION, BATTERY CHARGER 120 VOLT AC (0.5 AMP MAX.) CONNECTION, ACCESS TO TRANSFER SWITCH CONTROL WIRES, AND TRANSFER SWITCH CONNECTION (IF SO EQUIPPED). REMOVE FRONT COVER FOR ACCESS.
 - 5) REFERENCE OWNERS MANUAL FOR LIFTING WARNINGS.
 - 6) REMOVE LIFT-OFF ENCLOSURE TO ACCESS EXHAUST MUFFLER.



| WEIGHT DATA | | | |
|-------------|--------------------|---------------------------------|---|
| ENGINE/KW | ENCLOSURE MATERIAL | WEIGHT (GENSET ONLY) (KG (LBS)) | WEIGHT (SHIPPING CARTON/SKID) (GENSET, SKID, & CARTON) (KG (LBS)) |
| 2.4L/17KW | ALUMINUM | 383 (843) | 413 (909) |