



FEEDER TABLE

50kw or 65kw GENERATOR CABINET

REV. DATE: 02/19/07

- CALCULATIONS BASED UPON NOMINAL VOLTAGE, WIRE SIZE IN AWG.
 - RECOMMENDED FEEDER SIZES FROM DISTRIBUTION TRANSFORMER TO THE POWER CABINET
 - NEUTRAL MUST BE TERMINATED INSIDE THE MAIN DISCONNECT PANEL AND NOT AT ANY GE CABINET.
 - THE GROUNDING CONDUCTOR WILL BE THE SAME SIZE AS THE FEEDER WIRES. THIS GROUND WILL RUN FROM THE EQUIPMENT BACK TO THE FACILITY POWER SOURCE/MAIN GROUNDING POINT AND ALWAYS TRAVEL IN THE SAME CONDUIT WITH THE FEEDERS AND NEUTRAL.
 - * MINIMUM WIRE SIZE FOR CIRCUIT BREAKER, BASED ON RECOMMENDED OVERCURRENT PROTECTION.
 - FOR A FULL SYSTEM UPS, REFER TO ELECTRICAL DETAILS FOR UPS FEEDER WIRES.
- NOTE: POWER RUN FROM WALL BOX/DUCT TO GENERATOR MUST BE WELDING CABLE OR EQUIVALENT.

RUN LENGTH IN FEET	POWER SUPPLY VOLTAGE					
	342-418 380	360-440 400	373-456 420	396-484 440	414-506 460	432-528 480
SIZE OF FEEDERS AND GROUND WIRES (AWG)						
50	* 4	* 4	* 4	* 4	* 4	* 4
100	3	* 4	* 4	* 4	* 4	* 4
150	2	2	2	3	3	* 4
200	1/0	1	1	2	2	2
250	2/0	2/0	1/0	1	1	1
300	3/0	2/0	2/0	1/0	1/0	1/0
350	4/0	3/0	3/0	2/0	2/0	1/0
400	250M	4/0	4/0	3/0	3/0	2/0
450	300M	250M	4/0	4/0	3/0	3/0

POWER SPECIFICATIONS

50kw or 65kw GENERATOR

REV. DATE: 05/15/07

VOLTAGE

PRIMARY SOURCE IS REQUIRED FOR ALL INSTALLATIONS.
 RANGE OF LINE VOLTAGES :
 NOMINAL LINE VOLTAGE OF 380 TO 480, 3 PHASE, WITHOUT NEUTRAL,
 50 OR 60 Hz.

REQUIRED POWER SUPPLY: WYE DISTRIBUTION

MAXIMUM DAILY VOLTAGE VARIATION MUST FALL WITHIN ONE OF THE RANGES IN TABLE A.

TABLE A
 ALLOWABLE
 INPUT
 VOLTAGES/
 CURRENT
 DEMAND

NOMINAL VOLTAGE	NORMAL RANGE ±10 PERCENT	CURRENT (AMPS)		MINIMUM STANDARD OVERCURRENT PROTECTION
		MAX. MOMENTARY	CONTINUOUS	
380	342-418	148	7	80-A
400	360-440	140	6.6	80-A
415	373-456	133	6.3	80-A
440	396-484	127	6	70-A
460	414-506	122	5.8	70-A
480	432-528	117	5.5	70-A

ALL CALCULATIONS BASED UPON NOMINAL VOLTAGE

NOTE

LOW LINE CONDITIONS MAY INHIBIT SOME HIGH kv_p TECHNIQUES. THE GENERATOR AUTOMATICALLY ESTABLISHES THESE INHIBITS BASED ON ACTUAL LINE CONDITIONS AND SYSTEM REGULATION.

PHASE-BALANCE.

PHASE-TO-PHASE VOLTAGES MUST BE WITHIN +2 PERCENT OF THE LOWEST PHASE-TO-PHASE VOLTAGE. MAXIMUM ALLOWABLE TRANSIENT VOLTAGE EXCURSIONS ARE 2.5 PERCENT OF RATED LINE VOLTAGE AT A MAXIMUM DURATION OF 5 CYCLES AND FREQUENCY OF 10 TIMES PER HOUR.

POWER DEMAND

CONTINUOUS POWER DEMAND =4.6 KVA. (MAX DEMAND = 97 KVA)

TABLE B
 MAXIMUM
 MOMENTARY
 POWER
 DEMAND.

DEMAND	PROTEUS/DEFINIUM
kVa * POWER FACTOR AT	97 0.73
mA	630
kv _p	80

* DEMAND INCLUDES POWER FOR ENTIRE SYSTEM. LINE VOLTAGE REGULATION AT MAXIMUM POWER DEMAND MUST BE LESS THAN OR EQUAL TO 6 PERCENT.

DISTRIBUTION TRANSFORMER

FOR A SINGLE UNIT INSTALLATION, THE MINIMUM TRANSFORMER SIZE IS 112.5 KVA.