Slant +/- 45° Dual Polarized, Panel 63° / 14.5 dBd

BXA-80063/6CF ___

When ordering, replace "___" with connector type.

Mechanical specifications

	Length	1804 mm	71.1	in
	Width	285 mm	11.2	in
	Depth	114 mm	4.5	in
4)	Weight	6.8 kg	14.9	lbs
	Wind Area			
	Front	0.536 m^2	5.76	ft^2
	Side	0.214 m^2	2.31	ft^2
	Rated Wind Velocity (Safety factor 2.0)			
		>438 km/hr	>272	mph
	Wind load @ 100 mph (161 km/hr)			
	Front	790 N	178	lbs
	Side	353 N	80	lbs

Antenna consisting of aluminum alloy with brass feed-lines covered by a UV safe fiberglass radome.

Mounting & Downtilting:

Mounting brackets attach to a pipe diameter of Ø50-160 mm (2.0-6.3 in).

Mounting bracket kit #36210002

Downtilt bracket kit #36114003

Electrical specifications

	Frequency Range	806-900 MHz*
	Impedance	50Ω
3)	Connector	NE, E-DIN
1)	VSWR	≤1.4:1
	Polarization	Slant ± 45°
1)	Isolation Between Ports	< -30 dB
1)	Gain	14.5 dBd
2)	Power Rating	500 W
1)	Half Power Angle	
	H-Plane	63°
	E-Plane	11°
1)	Electrical Downtilt	0°
1)	Null Fill	5%
	Lightning Protection	Direct Ground

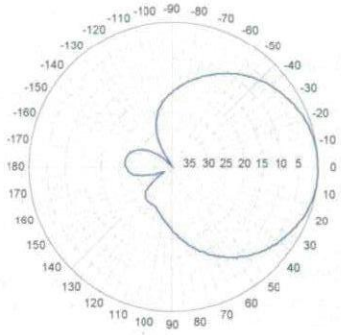
*Also available up to 960 MHz. Consult your sales director for more information.

Patented Dipole Design: U.S. Patent No. 6,608,600 B2

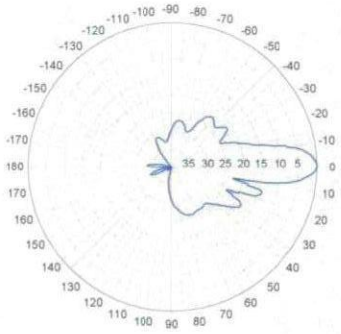
1) Typical Values
2) Power Rating limited by connector only.
3) NE indicates an elongated N Connector. E-DIN indicates an elongated DIN Connector.
4) The antenna weight listed above does not include the bracket weight.

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

Radiation-pattern[1)]



Horizontal



Vertical

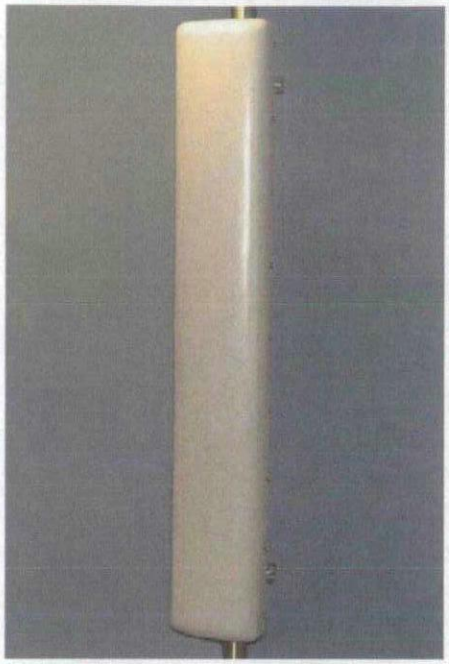
Featuring upper side lobe suppression.

Radiation patterns for all antennas are measured with the antenna mounted on a fiberglass pole.

Mounting on a metal pole will typically improve the Front-to-Back Ratio.

CF Denotes a Center-Fed Connector.

806-900 MHz



Amphenol Antel's Exclusive 3T (True Transmission Line Technology) Antenna Design:

- Watercut brass feedline assembly for consistent performance.
- Unique feedline design eliminates the need for conventional solder joints in the signal path.
- A non-collinear system with access to every radiating element for broad band-width and superior performance.
- Air as insulation for virtually no internal signal loss.

Every Amphenol Antel antenna is under a five-year limited warranty for repair or re-placement.

Antenna available with center-fed connector only.

Amphenol Antel, Inc.
The Antenna Technology Company

1300 Capital Drive Rockford, IL 61109 Toll-Free (888) 417-9562 Tel. (815) 399-0001
Fax. (815) 399-0156 Email: antel@antelinc.com www.antelinc.com

Revision Date: 6/3/04

Slant +/- 45° Dual Polarized, Panel 63° / 20 dBi

BXA-185063/12CF ___ 2°

When ordering, replace "___" with connector type.

Mechanical specifications

	Length	1840 mm	72.44 in
	Width	154 mm	6.06 in
	Depth	105 mm	4.13 in
4)	Weight	6.8 kg	15 lbs
	Wind Area		
	Front	0.283 m^2	3.05 ft^2
	Side	0.217 m^2	2.34 ft^2
	Rated Wind Velocity (Safety factor 2.0)		
		>237 km/hr	>148 mph
	Wind load @ 100 mph (161 km/hr)		
	Front	460 N	103.4 lbs
	Side	372 N	83.5 lbs

Antenna consisting of aluminum alloy with brass feed-lines covered by a UV safe fiberglass radome.

Mounting & Downtilting:

Wall mounted or pole tower mount with mounting brackets.

Mounting bracket kit #26799997

Downtilt bracket kit #26799999
The downtilt bracket kit includes the mounting bracket kit.

Electrical specifications

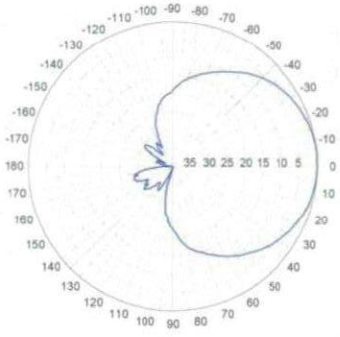
	Frequency Range	1850-1990 MHz
	Impedance	50Ω
3)	Connector	NE, E-DIN
1)	VSWR	≤1.4:1
	Polarization	Slant ± 45°
1)	Isolation Between Ports	< -30 dB
1)	Gain	20 dBi
2)	Power Rating	250 W
1)	Half Power Angle	
	H-Plane	63°
	E-Plane	5°
1)	Electrical Downtilt	2°
1)	Null Fill	5%
	Lightning Protection	Direct Ground

Patented Dipole Design: U.S. Patent No. 6,597,324 B2

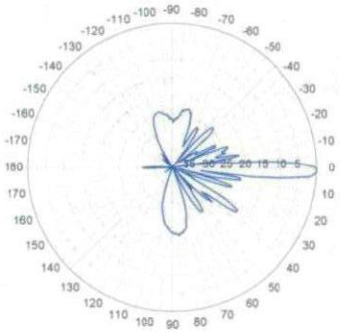
1) Typical Values
2) Power Rating limited by connector only.
3) NE indicates an elongated N Connector.
E-DIN indicates an elongated DIN Connector.
4) The antenna weight listed above does not include the bracket weight.

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

Radiation-pattern[1)]



Horizontal



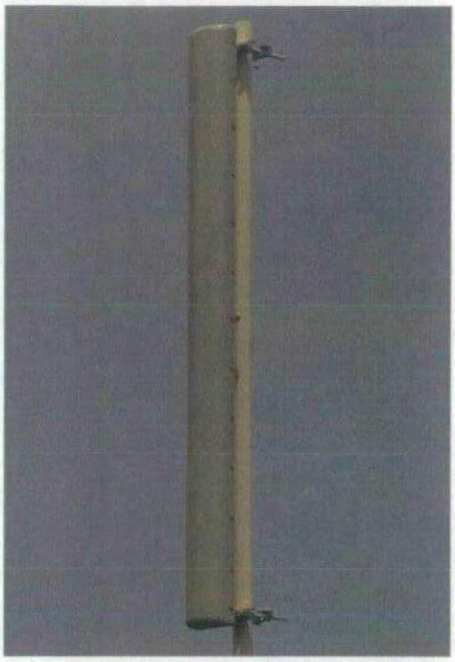
Vertical

Radiation patterns for all antennas are measured with the antenna mounted on a fiberglass pole.

Mounting on a metal pole will typically improve the Front-to-Back Ratio.

CF Denotes a Center-Fed Connector.

1850-1990 MHz



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Amphenol Antel, Inc.
The Antenna Technology Company

Revision Date: 9/16/04

Flexent® Modular Cell 4.0

Description

The *Flexent*® Modular Cell 4.0 builds on our vast experience in spread spectrum to deliver the most flexible, future-focused base station on the market. This base station introduces the *Flexent® OneBTS™* common platform digital shelf into CDMA networks. This shelf, with a field upgrade, will eventually support both CDMA and UMTS in the frame.

The *Flexent* Modular Cell 4.0 packs 6 carriers/3 sectors into an outdoor cabinet that is the same size as the *Flexent* Modular Cell 3.0. The smaller indoor cabinet will support 4 carriers/3 sectors. In addition to capacity gains, this digital shelf will support additional enhancements as we bring them to market.

Our Bell Labs developers are working on Intelligent Antennas, Transmit Diversity, and BLAST technologies. These technologies will enhance the capacities and capabilities of the *Flexent* Modular Cell 4.0. Each of the features can be added to the *Flexent* Modular Cell 4.0 in the field - in a single maintenance window. This means that you can deploy the *Flexent* Modular Cell 4.0 today and add capacity and capabilities whenever they are available and when you need them. It means that the future is available on your timetable, when your business plan calls for them, no matter what your business plan might be.

Value description

The *Flexent* Modular Cell 4.0, with its future-proof design, enables easy and cost-effective network upgrades to:

- Add additional capacity, when needed, to support network growth
- Support additional functionality and advanced capabilities

Features

Investment Protection

- Increase capacity, when you need it, to grow your network
- Add advanced features and capabilities, with quick and easy installation

Scalability

- Support up to 6 carriers/3 sectors in a single outdoor cabinet
- Support up to 4 carriers/3 sectors in the indoor cabinet

Reduced Footprint

- Provides additional capacity and functionality — in the same footprint as the *Flexent* Modular Cell 3.0

BLAST: Bell Labs Layered Space-Time

An Architecture for Realizing Very High Data Rates over Fading Wireless Channels

What is BLAST?

BLAST is an extraordinarily bandwidth-efficient approach to wireless communication which takes advantage of the spatial dimension by transmitting and detecting a number of independent co-channel data streams using multiple, essentially co-located, antennas.

The central paradigm behind BLAST is the exploitation, rather than the mitigation, of multipath effects in order to achieve very high spectral efficiencies (bits/sec/Hz), significantly higher than are possible when multipath is viewed a an adversary rather than an ally.

Using our laboratory testbed, the BLAST team recently demonstrated what we believe to be **unprecedented wireless spectral efficiencies, ranging from 20 - 40 bps/Hz**. By comparison, the efficiencies achieved using traditional wireless modulation techniques range from around 1 - 5 bps/Hz (mobile cellular) to around 10 - 12 bps/Hz (point-to-point fixed microwave systems). In the 30 kHz bandwidth utilized by our research testbed, the raw spectral efficiencie realized thus far in the lab correspond to payload data rates ranging from roughly 0.5 Mb/s to 1 Mb/s. By contrast, the data rate achievable in this bandwidth using typical traditional methods is only about 50 kbps.

This high-level overview discusses BLAST in more detail.

Blast Measurements have been done and reported.

Blast in the Press

For additional information, contact rav@bell-labs.com.

BLAST-related open literature

- D. Chizhik, G. Foschini, M. Gans, and R. Valenzuela, *Keyholes, Correlations, and Capacities of Multielement Transmit and Receive Antennas* , IEEE Transaction on Wireless Communications. Vol. 1, No. 2, April 2002, pp. 361-368.
- G. J. Foschini, M. J. Gans, *Capacity when Using Multiple Antennas at Transmit and Receive Sites and Rayleigh Faded Matrix Channel is Unknown to the Transmitter*, Advances in Wireless Communications, Ed. J. M Holtzman and M. Zorzi, Kulwer Academic Publishers, 1998.
- G. D. Golden, G. J. Foschini, R. A. Valenzuela, P. W. Wolniansky, Detection Algorithm and Initial Laboratory Results using the V-BLAST Space-Time Communication Architecture , Electronics Letters, Vol. 35, No. 1, Jan. 7, 1999, pp. 14-15.
- G. J. Foschini, G.D.Golden, R.A.Valenzuela, P.W.Wolniansky, Simplified Processing for Wireless Communication at High Spectral Efficiency, IEEE Journal on Select Areas in Coummunications, Vol. 17, No.

11, 1999.

- D-S. Shiu, G.J. Foschini, M.J. Gans, J.M.Kahn, Fading Correlation, and its Effect on the Capacity of Multielement Antenna Systems, IEEE Transactions on Communications, Vol 48, No 3, 2000.

- P. W. Wolniansky, G. J. Foschini, G. D. Golden, R. A. Valenzuela, *V-BLAST: An Architecture for Realizing V High Data Rates Over the Rich-Scattering Wireless Channel*, invited paper, *Proc. ISSSE-98*, Pisa, Italy, Sept. 29, 1998.
[PostScript (839 kb)] [gzipped PostScript (71 kb)] [PDF (46 kb)]

- G. D. Golden, G. J. Foschini, P. W. Wolniansky, R. A. Valenzuela, *V-BLAST: A High Capacity Space-Time Architecture for the Rich-Scattering Wireless Channel*, *Proc. Int'l Symposium on Advanced Radio Technologie* Boulder, CO, Sept. 10, 1998.

- G. D. Golden, G. J. Foschini, R. A. Valenzuela, P. W. Wolniansky, *V-BLAST: A High Capacity Space-Time Architecture for the Rich-Scattering Wireless Channel*, Fifth Workshop on Smart Antennas in Wireless Mobile Communications, Stanford Univ., July 23-24, 1998.

- G. J. Foschini and M. J. Gans, *On Limits of Wireless Communications in a Fading Environment When Using Multiple Antennas*, Wireless Personal Communications, Volume 6, No. 3, March 1998, p. 311.

- G. J. Foschini and R. A. Valenzuela, *Initial Estimation of Communications Efficiency of Indoor Wireless Channels*, Wireless Networks, 3 (1997) pp 141-154.

- G. J. Foschini, *Layered Space-Time Architecture for Wireless Communication in a Fading Environment When Using Multiple Antennas*, Bell Labs Technical Journal, Vol. 1, No. 2, Autumn 1996, pp 41-59.

- G. J. Foschini and M. J. Gans, *Capacity When Using Diversity at Transmit and Receive Sites and the Matrix Channel is Unknown at the Transmitter*, Proceedings of the 6-th WINLAB Workshop on 3rd Generation Wireless Information Networks, March 20-21, 1996, New Brunswick, New Jersey.

BLAST- Measurement Literature

- M. Gans et. al., *Multielement Antenna Systems Capacity Measurements at 2.44GHz in Suburban Outdoor Environment*, IEEE Vehicular Technology Conference, Spring 2001.

- J. Ling, et. al., *Multiple Transmit Multiple Receive (MTMR) Capacity Survey in Manhattan*, Electronic Letters, Vol. 37, No. 16, August 2001, pg. 1041.

- D. Chizhik, J. Ling, P. Wolniansky, R. Valenzuela, N. Costa, and K. Huber, *Multiple Input Multiple Output Measurements and Modeling in Manhattan*, Submitted to JSAC Special Issue on MIMO.

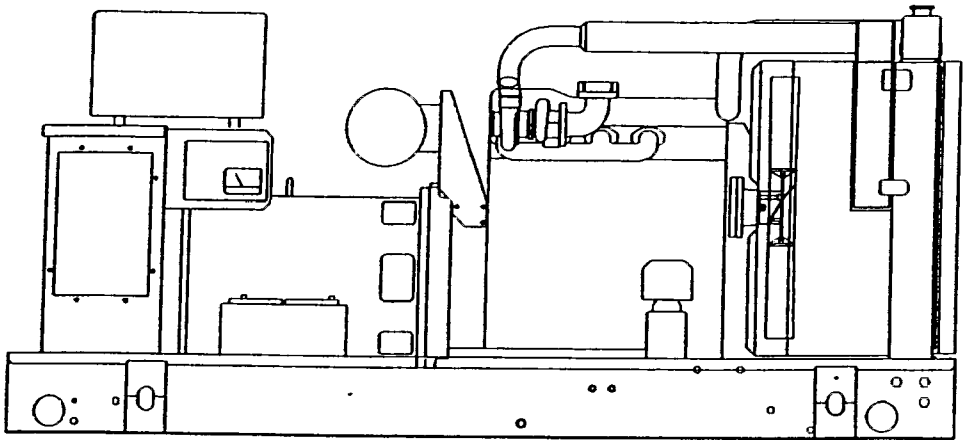
haleem@bell-labs.com
Last updated 6/5/00

SD060

Liquid Cooled Diesel Engine Generator Sets

Continuous Standby Power Rating
60KW 60 Hz / 60KVA 50 Hz

Prime Power Rating
48KW 60 Hz /48KVA 50 Hz



Power Matched
GENERAC 3.9DTA ENGINE
Turbocharged

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
  - ✓ ELECTRO-MAGNETIC INTERFERENCE
  - ✓ NEMA MG1-22 EVALUATION
  - ✓ MOTOR STARTING ABILITY
  - ✓ SHORT CIRCUIT TESTING
  - ✓ UL 2200 COMPLIANCE AVAILABLE

- **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.

- **SINGLE SOURCE SERVICE RESPONSE** from Generac's dealer network provides parts and service know-how for the entire unit, from the engine to the smallest electronic component. You are never on your own when you own an GENERAC POWER SYSTEM.

- **ECONOMICAL DIESEL POWER.** Low cost operation due to modern diesel engine technology. Better fuel utilization plus lower cost per gallon provide real savings.

- **LONGER ENGINE LIFE.** Generac heavy-duty diesels provide long and reliable operating life.

- **GENERAC TRANSFER SWITCHES, SWITCHGEAR AND ACCESSORIES.** Long life and reliability is synonymous with GENERAC POWER SYSTEMS. One reason for this confidence is that the GENERAC product line includes its own transfer systems, accessories, switchgear and controls for total system compatibility.

GENERAC®
POWER SYSTEMS, INC.

APPLICATION & ENGINEERING DATA

SD060

GENERATOR SPECIFICATIONS

TYPE	Four-pole, revolving field
ROTOR INSULATION	Class H
STATOR INSULATION	Class H
TOTAL HARMONIC DISTORTION	<3%
TELEPHONE INTERFERENCE FACTOR (TIF)	<50
ALTERNATOR	Self-ventilated and drip-proof
BEARINGS (PRE-LUBED & SEALED)	1
COUPLING	Direct, Flexible Disc
LOAD CAPACITY (STANDBY)	100%
LOAD CAPACITY (PRIME)	110%

NOTE: Emergency loading in compliance with NFPA 99, NFPA 110, paragraph 5-13.2.6. Generator rating and performance in accordance with ISO8528-5, BS5514, SAE J1349, ISO3046 and DIN6271 standards.

EXCITATION SYSTEM

☐ BRUSHLESS	Magnetically coupled DC current ✓
	Eight-pole exciter w/ battery-driven field boost ✓
	Mounted outboard of main bearing ✓
☐ PERMANENT MAGNET EXCITER	Eighteen pole exciter ✓
	Magnetically coupled DC current ✓
	Mounted outboard of main bearing ✓
REGULATION	Solid-state ✓
	±1% regulation ✓

GENERATOR FEATURES

- Four pole, revolving field generator is directly connected to the engine shaft through a heavy-duty, flexible disc for permanent alignment.
- Generator meets temperature rise standards for class "F" insulation as define by NEMA MG1-32.6 and NEMA1-1.65, while the insulation system meets the requirements for the higher class "H" rating.
- All models have passed a three-phase symmetrical short circuit test to assure system protection and reliability.
- Unit is tested with an oscillograph for motor-starting ability by measuring instantaneous voltage dip.
- All models utilize an advanced wire harness design for reliable interconnection within the circuitry.
- Magnetic circuit, including amortisseur windings, tooth and skewed stator design, provides a minimal level of waveform distortion and an electromagnetic interference level which meets accepted requirements for standard AM radio, TV, and marine radio telephone applications.
- Voltage waveform deviation, total harmonic content of the AC waveform, T.I.F. (Telephone Influence Factor) and non-linear loading have been evaluated to acceptable standards in accordance with NEMA MG1.
- Alternator is self-ventilated and drip-proof constructed.
- Fully life-tested protective systems, including "field circuit and thermal overload protection" and optional main-line circuit breakers are capable of handling full output capacity.
- System Torsional acceptability confirmed during Prototype Testing.

ENGINE SPECIFICATIONS

MAKE	GENERAC
MODEL	3.9DTA
CYLINDERS	4 in-line
DISPLACEMENT	3.9 Liter (238 cu.in.)
BORE	104 mm (4.09 in.)
STROKE	115 mm (4.52 in.)
COMPRESSION RATIO	16.5:1
INTAKE AIR	Turbocharged/Aftercooled
NUMBER OF MAIN BEARINGS	5
CONNECTING RODS	4-Drop Forged Steel
CYLINDER HEAD	Cast Iron Overhead Valve
PISTONS	4- Aluminum Alloy
CRANKSHAFT	Hardened, Steel

VALVE TRAIN

LIFTER TYPE	Solid
INTAKE VALVE MATERIAL	Special Heat Resistant Steel
EXHAUST VALVE MATERIAL	Special Heat Resistant Steel
HARDENED VALVE SEATS	Replaceable

ENGINE GOVERNOR

☐ MECHANICAL (Gear Driven)	Standard
FREQUENCY REGULATION, NO-LOAD TO FULL LOAD	5.0%
STEADY STATE REGULATION	±0.33%
☐ ELECTRONIC	Optional
FREQUENCY REGULATION, NO-LOAD TO FULL LOAD	0.5%
STEADY STATE REGULATION	±0.25%

LUBRICATION SYSTEM

TYPE OF OIL PUMP	Gear
OIL FILTER	Full flow, Cartridge
CRANKCASE CAPACITY	18 Litres (19 qts.)
OIL COOLER	Oil to water

COOLING SYSTEM

TYPE OF SYSTEM	Pressurized, Closed Recovery
WATER PUMP	Pre-Lubed, Self-Sealing
TYPE OF FAN	Pusher
NUMBER OF FAN BLADES	7
DIAMETER OF FAN	457 mm (18 in.)
COOLANT HEATER	120V, 1800 W

FUEL SYSTEM

FUEL	#2D Fuel (Min Cetane #40) (Fuel should conform to ASTM Spec.)
FUEL FILTER	Single Cartridge
FUEL INJECTION PUMP	Stanadyne
FUEL PUMP	Mechanical
INJECTORS	Multi-Hole, Nozzle Type
ENGINE TYPE	Direct Injection
FUEL LINE (Supply)	7.94 mm (0.31 in.)
FUEL RETURN LINE	6.35 mm (0.25 in.)
STARTING AID	Glow Plugs

ELECTRICAL SYSTEM

BATTERY CHARGE ALTERNATOR	30 Amps at 24 V
STARTER MOTOR	24 V
RECOMMENDED BATTERY	(2)—12 Volt, 90 A.H., 4DLT
GROUND POLARITY	Negative

Rating definitions - Standby: Applicable for supplying emergency power for the duration of the utility power outage. No overload capability is available for this rating. (All ratings in accordance with BS5514, ISO3046 and DIN6271). Prime (Unlimited Running Time): Applicable for supplying electric power in lieu of commercially purchased power. Prime power is the maximum power available at variable load. A 10% overload capacity is available for 1 hour in 12 hours. (All ratings in accordance with BS5514, ISO3046, ISO8528 and DIN6271).

GENERAC®
POWER SYSTEMS, INC.

SD060

OPERATING DATA

		STANDBY		PRIME	
		SD060		SD060	
GENERATOR OUTPUT VOLTAGE/KW-60Hz			Rated AMP		Rated AMP
120/240V, 1-phase, 1.0 pf		60	250	48	200
120/208V, 3-phase, 0.8 pf	NOTE: Consult your Generac dealer for additional voltages	60	208	48	166
120/240V, 3-phase, 0.8 pf		60	180	48	144
277/480V, 3-phase, 0.8 pf		60	90	48	72
600V, 3-phase, 0.8 pf		60	72	48	58
GENERATOR OUTPUT VOLTAGE/KVA-50Hz			Rated AMP		Rated AMP
110/220V, 1-phase, 1.0 pf		48	218	38	172
115/200V, 3-phase, 0.8 pf	NOTE: Consult your Generac dealer for additional voltage	60	173	48	138
100/200V, 3-phase, 0.8 pf		60	173	48	138
231/400V, 3-phase, 0.8 pf		60	87	48	69
480V, 3-phase, 0.8 pf		60	72	48	58
MOTOR STARTING KVA					
Maximum at 35% instantaneous voltage dip		120/208/240V	277/480V	120/208/240V	277/480V
with standard alternator; 50/60 Hz		100/120	117/141	100/120	117/141
with optional alternator; 50/60 Hz		234/281	276/331	234/281	276/331
FUEL					
Fuel consumption—60 Hz	Load	100%	80%	100%	80%
	gal./hr.	4.3	3.6	3.6	3.0
	liters/hr.	16.3	13.5	13.6	11.3
Fuel consumption—50 Hz	gal./hr.	3.6	3.0	3.0	2.5
	liters/hr.	13.5	11.2	11.3	9.3
Fuel pump lift					
COOLING					
Coolant capacity	System - lit. (US gal.)		15.9 (4.2)		15.9 (4.2)
	Engine - lit. (US gal.)		6.4 (1.7)		6.4 (1.7)
	Radiator - lit. (US gal.)		9.5 (2.5)		9.5 (2.5)
Coolant flow/min	60 Hz - lit. (US gal.)		128 (34)		128 (34)
	50 Hz - lit. (US gal.)		107 (28)		107 (28)
Heat rejection to coolant 60 Hz full load BTU/hr.			170,900		136,700
Heat rejection to coolant 50 Hz full load BTU/hr.			142,400		113,900
Inlet air to radiator	60 Hz - m^3/min. (cfm)		204 (7,200)		204 (7,200)
	50 Hz - m^3/min. (cfm)		170 (6004)		170 (6004)
Max. air temperature to radiator	°C (°F)		54.4 (130)		54.4 (130)
Max. ambient temperature	°C (°F)		48.9 (120)		48.9 (120)
COMBUSTION AIR REQUIREMENTS					
Flow at rated power	60 Hz - cfm		209		168
	50 Hz - m^3/min.		4.7		3.8
EXHAUST					
Exhaust flow at rated output 60 Hz - m^3/min. (cfm)			15.5 (549)		12.4 (439)
	50 Hz - m^3/min. (cfm)		12.3 (434)		10 (353)
Max recommended back pressure	"Hg		1.5		1.5
Exhaust temperature 60 Hz (full load)	°C (°F)		524 (975)		459 (858)
Exhaust outlet size			3"		3"
ENGINE					
Rated RPM	60 Hz		1800		1800
	50 Hz		1500		1500
HP at rated KW	60 Hz		92		74
	50 Hz		73		59
Piston speed	60 Hz - m/min. (ft./min.)		414 (1358)		414 (1358)
	50 Hz - m/min. (ft./min.)		345 (1132)		345 (1132)
BMEP	60 Hz - psi		170		138
	50 Hz - psi		161		130
DERATION FACTORS					
Temperature					
5% for every 10°C above - °C			25		25
2.77% for every 10°F above - °F			77		77
Altitude					
1.1% for every 100 m above - m			1829		1829
3.5% for every 1000 ft. above - ft.			6000		6000

STANDARD ENGINE & SAFETY FEATURES

SD060

- High Coolant Temperature Automatic Shutdown
- Low Coolant Level Automatic Shutdown
- Low Oil Pressure Automatic Shutdown
- Overspeed Automatic Shutdown (Solid-state)
- Crank Limiter (Solid-state)
- Oil Drain Extension
- Radiator Drain Extension
- Factory-Installed Cool Flow Radiator
- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Rubber-Booted Engine Electrical Connections
- Secondary Fuel Filter
- Fuel Lockoff Solenoid
- Stainless Steel Flexible Exhaust Connection
- Battery Charge Alternator
- Battery Cables
- Battery Tray
- Vibration Isolation of Unit to Mounting Base
- 12 Volt, Solenoid-activated Starter Motor
- Air Cleaner
- Fan Guard
- Control Console
- Radiator Duct Adapter

OPTIONS

OPTIONAL COOLING SYSTEM ACCESSORIES
- O Coolant Heater 120V

OPTIONAL FUEL ACCESSORIES
- O Flexible Fuel Lines
- O UL Listed Fuel Tanks
- O Base Tank Low Fuel Alarm
- O Primary Fuel Filter
- O Primary Fuel Filter with Heater

OPTIONAL EXHAUST ACCESSORIES
- O Critical Exhaust Silencer

OPTIONAL ELECTRICAL ACCESSORIES
- O Battery, 12 Volt, 135 A.H., 4DLT
- O 2A Battery Charger
- O 10A Dual Rate Battery Charger
- O Battery Heater

OPTIONAL ALTERNATOR ACCESSORIES
- O Alternator Upsizing
- O Alternator Strip Heater
- O Alternator Tropicalization
- O Voltage Changeover Switch
- O Main Line Circuit Breaker

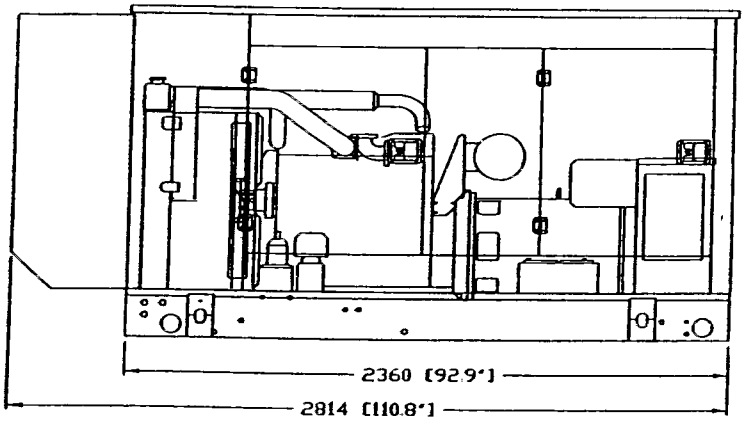
CONTROL CONSOLE OPTIONS
- O Analog Control "C" Panel (Bulletin 0151160SBY)
- O Analog/Digital Control "E" Panel (Bulletin 0161310SBY)

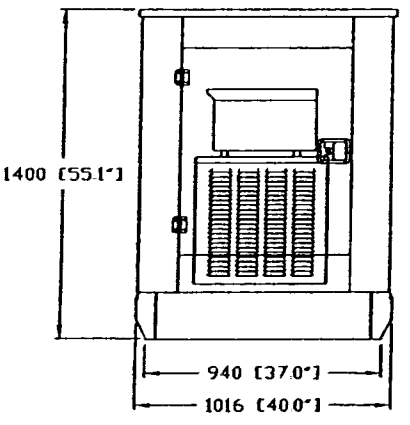
ADDITIONAL OPTIONAL EQUIPMENT
- O Automatic Transfer Switch
- O Isochronous Governor
- O 3 Light Remote Annunciator
- O 5 Light Remote Annunciator
- O 20 Light Remote Annunciator
- O Remote Relay Panels
- O Unit Vibration Isolators (Pad/Spring)
- O Oil Make-Up System
- O Oil Heater
- O 5 Year Warranties
- O Export Boxing
- O GenLink® Communications Software

OPTIONAL ENCLOSURE
- O Weather Protective
- O Sound Attenuated
- O Aluminum and Stainless Steel
- O Enclosed Muffler

Distributed by:

Design and specifications subject to change without notice. Dimensions shown are approximate. Contact your Generac dealer for certified drawings. DO NOT USE THESE DIMENSIONS FOR INSTALLATION PURPOSES





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