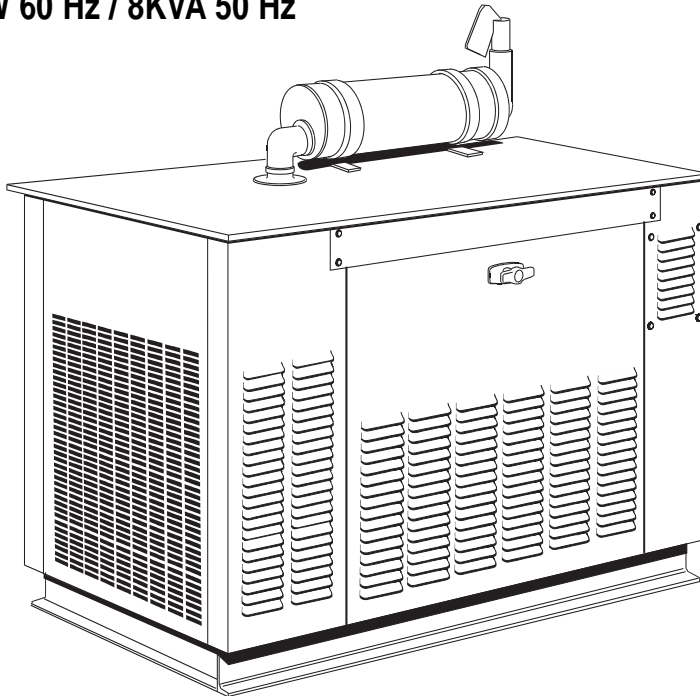


# SD008

## Liquid Cooled Diesel Engine Generator Sets

Continuous Standby Power Rating  
8KW 60 Hz / 8KVA 50 Hz

Prime Power Rating  
6.4KW 60 Hz / 6.4KVA 50 Hz



Power Matched  
**GENERAC 1.0DN ENGINE**  
Naturally Aspirated

## 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
- **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**<sup>®</sup>  
POWER SYSTEMS, INC.

## GENERATOR SPECIFICATIONS

TYPE .....	Four-pole, revolving field
ROTOR INSULATION .....	Class F
STATOR INSULATION .....	Class F
TOTAL HARMONIC DISTORTION .....	<5%
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

DIRECT .....	DC excitation system ✓
	Low-velocity brushes and slip rings ✓
REGULATION .....	Solid-state ✓
	±1% regulation ✓

## GENERATOR FEATURES

- Four pole, revolving field generator, 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 defined by NEMA MG1-22.4 and NEMA MG1-1.65.
- Rotor and stator and other insulation is impregnated twice with class "F" varnish.
- All models have passed a three-phase symmetrical short circuit test to assure system protection and reliability.
- Unit tested for motor-starting ability by measuring instantaneous voltage dip with an oscillograph.
- 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, and T.I.F. (Telephone Influence Factor) have been evaluated to acceptable standards in accordance with NEMA MG1-22.
- 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 capable of handling full output capacity.
- System Torsional acceptability confirmed during Prototype Testing.

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).

## ENGINE SPECIFICATIONS

MAKE .....	GENERAC
MODEL .....	1.0DN
CYLINDERS .....	3 in-line
DISPLACEMENT .....	1.0 Liter (61 cu. in.)
BORE .....	75mm (2.95 in.)
STROKE .....	72mm (2.83 in.)
COMPRESSION RATIO .....	23:1
INTAKE AIR .....	Naturally Aspirated
NUMBER OF MAIN BEARINGS .....	4
CONNECTING RODS .....	3-Drop forged steel
CYLINDER HEAD .....	Cast iron w/ overhead valve
PISTONS .....	3—Aluminum alloy
CRANKSHAFT .....	Forged Steel

### VALVE TRAIN

LIFTER TYPE .....	Solid
INTAKE VALVE MATERIAL .....	Silicon Chrome
EXHAUST VALVE MATERIAL .....	Stellite
HARDENED VALVE SEATS .....	Replaceable

### ENGINE GOVERNOR

<input type="checkbox"/> MECHANICAL (Gear Driven) .....	Standard
FREQUENCY REGULATION, NO-LOAD TO FULL LOAD ...	5.0%
STEADY STATE REGULATION .....	±0.5%

### LUBRICATION SYSTEM

TYPE OF OIL PUMP .....	Gear
OIL FILTER .....	Full flow, cartridge
CRANKCASE CAPACITY .....	2.8 Liters (3.0 qts.)

### COOLING SYSTEM

TYPE OF SYSTEM .....	Pressurized, closed recovery
WATER PUMP .....	Pre-lubed, self-sealing
TYPE OF FAN .....	Pusher
NUMBER OF FAN BLADES .....	6
DIAMETER OF FAN .....	380mm (15.0 in.)
COOLANT HEATER .....	500 W

### FUEL SYSTEM

FUEL .....	#2D Fuel (Min Cetane #40) (Fuel should conform to ASTM Spec.)
FUEL FILTER .....	10 Micron
FUEL INJECTION PUMP .....	Bosch, Throttle Type
FUEL PUMP .....	Engine Driven Gear Type
INJECTORS .....	Pintel Type, 2100 PSI
ENGINE TYPE .....	Pre-combustion, swirl chamber
FUEL LINE (Supply) .....	6.35 mm (0.25 in.)
FUEL RETURN LINE .....	3.17 mm (0.125 in.)

### ELECTRICAL SYSTEM

BATTERY CHARGE ALTERNATOR .....	10 Amps at 12 V
STARTER MOTOR .....	12 V
RECOMMENDED BATTERY .....	(1) - 12 V, 75 A.H., 26F
GROUND POLARITY .....	Negative

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**OPERATING DATA**

	<b>STANDBY</b>				<b>PRIME</b>				
	<b>SD008</b>				<b>SD008</b>				
<b>GENERATOR OUTPUT VOLTAGE/KW-60Hz</b>			<b>Rated AMP</b>				<b>Rated AMP</b>		
120/240V, 1-phase, 1.0 pf	8			33.3	6.4			26.7	
120/208V, 3-phase, 0.8 pf	8			27.8	6.4			22.2	
120/240V, 3-phase, 0.8 pf	8			24.1	6.4			19.3	
NOTE: Consult your Generac dealer for additional voltages.									
<b>GENERATOR OUTPUT VOLTAGE/KVA-50Hz</b>			<b>Rated AMP</b>				<b>Rated AMP</b>		
110/220V, 1-phase, 1.0 pf	6.4			29.1	5.0			22.7	
115/200V, 3-phase, 0.8 pf	8			23.1	6.4			18.5	
100/200V, 3-phase, 0.8 pf	8			23.1	6.4			18.5	
NOTE: Consult your Generac dealer for additional voltages.									
<b>MOTOR STARTING</b>									
Maximum at 35% instantaneous voltage dip									
50/60 Hz	<b>231/240V</b>		<b>400/480V</b>		<b>231/240V</b>		<b>400/480V</b>		
	18/21 KVA		25/30 KVA		18/21 KVA		25/30 KVA		
<b>FUEL</b>									
Fuel consumption—60 Hz	Load	<b>25%</b>	<b>50%</b>	<b>75%</b>	<b>100%</b>	<b>25%</b>	<b>50%</b>	<b>75%</b>	<b>100%</b>
	gal./hr.	0.35	0.52	0.63	0.84	0.27	0.41	0.49	0.66
	liters/hr.	1.3	2.0	2.4	3.2	1.0	1.6	1.9	2.5
Fuel consumption—50 Hz	gal./hr.	0.31	0.47	0.56	0.68	0.24	0.37	0.44	0.53
	liters/hr.	1.2	1.8	2.1	2.6	0.94	1.4	1.6	2.0
Fuel pump lift	meters (in.)	0.9 (36)			0.9 (36)				
<b>COOLING</b>									
Coolant capacity	System - lit. (US gal.)	6.6 (1.75)			6.6 (1.75)				
	Engine - lit. (US gal.)	2.8 (0.75)			2.8 (0.75)				
	Radiator - lit. (US gal.)	3.8 (1.0)			3.8 (1.0)				
Coolant flow/min.	60 Hz - lit. (US gal.)	30 (8)			30 (8)				
	50 Hz - lit. (US gal.)	25 (6.8)			25 (6.8)				
Heat rejection to coolant	BTU/hr.	35,000			27,000				
Inlet air	60 Hz - m <sup>3</sup> /min. (cfm)	43.8 (1540)			43.8 (1540)				
	50 Hz - m <sup>3</sup> /min. (cfm)	36.6 (1285)			36.6 (1285)				
Max. inlet air temperature	°F	110			110				
<b>COMBUSTION AIR REQUIREMENTS</b>									
Flow at rated power	60 Hz - m <sup>3</sup> /min. (cfm)	0.8 (28)			0.8 (28)				
	50 Hz - m <sup>3</sup> /min. (cfm)	0.65 (23)			0.65 (23)				
<b>EXHAUST</b>									
Exhaust flow at rated output	60 Hz - m <sup>3</sup> /min. (cfm)	2.1 (75)			1.9 (68)				
	50 Hz - m <sup>3</sup> /min. (cfm)	1.8 (62.5)			1.7 (60.7)				
Max recommended back pressure	Kpa(Hg)	5.0 (1.5")			5.0 (1.5")				
Exhaust temp. at rated output	°C (°F)	510 (950)			480 (900)				
Exhaust outlet size	N.P.T. (female)	1.5"			1.5"				
<b>ENGINE</b>									
Rated RPM	60 Hz	1800			1800				
	50 Hz	1500			1500				
HP at rated KW	60 Hz	12			10				
	50 Hz	10			8				
Piston speed	60 Hz - m/min. (ft./min.)	259 (850)			259 (850)				
	50 Hz - m/min. (ft./min.)	216 (708)			216 (708)				
BMEP	60 Hz - psi	92			73				
	50 Hz - psi	88			70				
<b>DERATION FACTORS</b>									
Temperature									
	5% for every 10°C above - °C	43			43				
	2.77% for every 10°F above - °F	110			110				
Altitude									
	1.1% for every 100 m above - m	150			150				
	3.5% for every 1000 ft. above - ft.	500			500				

# STANDARD ENGINE & SAFETY FEATURES

SD008

- 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

## OPTIONS

### ■ OPTIONAL COOLING SYSTEM ACCESSORIES

- Radiator Duct Adapter

### ■ OPTIONAL FUEL ACCESSORIES

- Flexible Fuel Lines
- Single Wall Base Tank
- Double Wall Base Tank w/alarm
- Base Tank Low Fuel Alarm
- Primary Fuel Filter
- Primary Fuel Filter with Heater

### ■ OPTIONAL EXHAUST ACCESSORIES

- Critical Exhaust Silencer

### ■ OPTIONAL ELECTRICAL ACCESSORIES

- Battery, 12 Volt, 75 A.H., 26F
- 2A Battery Charger

### ■ OPTIONAL ALTERNATOR ACCESSORIES

- Alternator Strip Heater
- Alternator Tropicalization
- Main Line Circuit Breaker

### ■ CONTROL CONSOLE OPTIONS

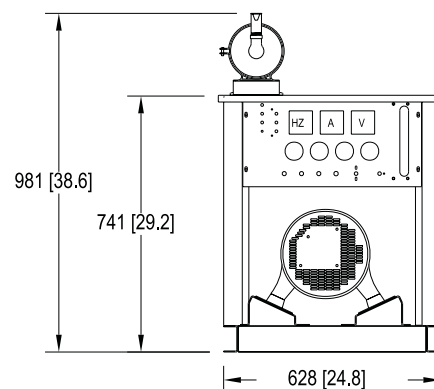
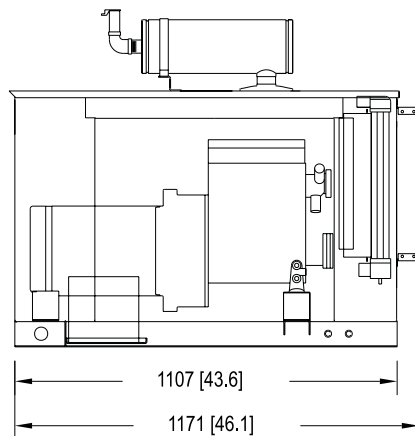
- See control console specification sheet

### ■ ADDITIONAL OPTIONAL EQUIPMENT

- Automatic Transfer Switch
- Weather Protective Enclosure (Locking Type)
- 3 Light Remote Annunciator
- 5 Light Remote Annunciator
- 18 Light Remote Annunciator
- Road Ready Trailer
- Unit Vibration Isolators
- 5 Year Warranties
- Export Boxing

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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GENERAC® POWER SYSTEMS, INC. • P.O. BOX 8 • WAUKESHA, WI 53187

262/544-4811 • FAX 262/544-4851