

SD275 SD300

Liquid Cooled Diesel Engine Generator Sets

Standby Power Rating

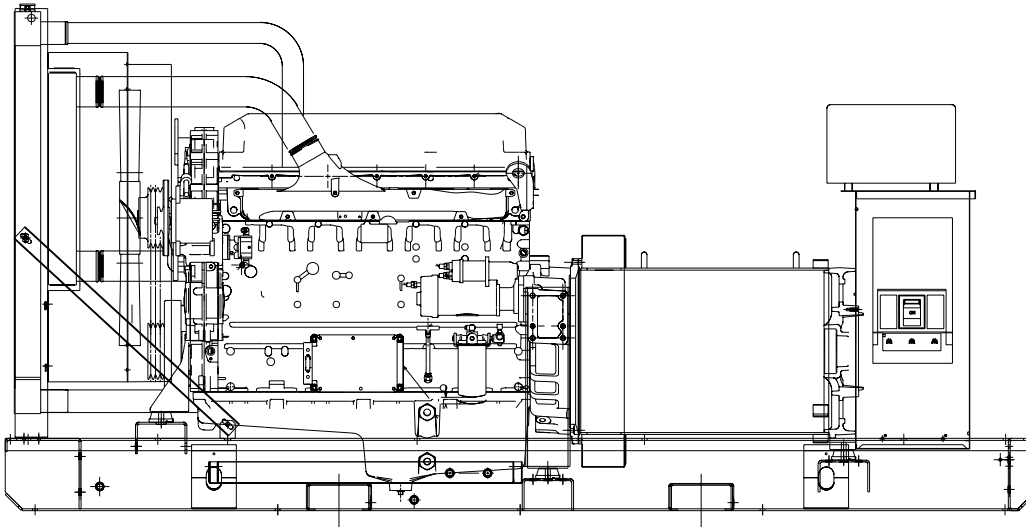
275KW 60Hz / 275KVA 50Hz

300KW 60Hz / 300KVA 50Hz

Prime Power Rating

233KW 60Hz / 233KVA 50Hz

245KW 60Hz / 245KVA 50Hz



Power Matched

DDC 12.7 DTA ENGINE

Turbocharged / Aftercooled

**DETROIT DIESEL
POWERED**

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 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 a 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.
- **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

SD275/SD300

GENERATOR SPECIFICATIONS

TYPE	Four-pole, revolving field
ROTOR INSULATION	Class H
STATOR INSULATION	Class H
LINE-TO-LINE HARMONIC FACTOR	5%
BALANCED TELEPHONE INFLUENCE 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

PERMANENT MAGNET EXCITER (standard)	±0.25% regulation ✓
	Enhances motor starting capabilities ✓
	Isolates the excitation system from non-linear loads ✓
	Sustains short circuit current (300% for 10 seconds) ✓
	Mounted outboard of main bearing (for easy maintenance) ✓
REGULATION	Solid-state ✓

GENERATOR FEATURES

- Four pole, revolving field generator, directly connected to the engine shaft through a heavy-duty, flexible disc for permanent alignment.
- Generator meets the temperature rise standards for class "F" insulation as defined by NEMA MG1-32.6, while the insulation system meets the requirements for the higher class "H" rating.
- All prototype models have passed a three-phase symmetrical short circuit test to assure system protection and reliability.
- All prototype models are tested for motor starting ability by measuring the instantaneous voltage dip with a waveform data acquisition system.
- 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 MG1-32.
- 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.

ENGINE SPECIFICATIONS

MAKE	Detroit Diesel
MODEL	Series 60, 4-Cycle
CYLINDERS	6-Inline
DISPLACEMENT - liter/(in ³)	12.7 (778)
BORE - mm/(in.)	130 (5.12)
STROKE - mm/(in.)	160 (6.30)
COMPRESSION RATIO	15.0:1
INTAKE AIR	Turbocharged/Aftercooled
NUMBER OF MAIN BEARINGS	7, Precision Half-Shell
CONNECTING RODS	I-Section, Forged Steel (SAE 4140)
CYLINDER HEAD	Slab, 4-Valve
PISTONS	Articulated / Oil Cooled
CRANKSHAFT	Induction Hardened, Forged Steel

VALVE TRAIN

LIFTER TYPE	Roller Follower
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ENGINE GOVERNOR

TYPE	DDEC IV Electronic Control
ELECTRONIC / ISOCHRONOUS	Standard
STEADY STATE FREQUENCY REGULATION	±0.25%

LUBRICATION SYSTEM

TYPE	Full Pressure
OIL FILTER	Full Flow Cartridge and Bypass
OIL PAN CAPACITY WITH FILTERS - liter/(qt.)	36.0 (38.0)

COOLING SYSTEM

TYPE OF SYSTEM	Pressurized, Closed Recovery
WATER PUMP TYPE	Centrifugal
TYPE OF FAN	Pusher
NUMBER OF FAN BLADES	7
DIAMETER OF FAN - mm/(in.)	914 (36.0)
COOLANT HEATER	120V(1800W)

FUEL SYSTEM

FUEL	No. 2 Diesel Fuel
	(Fuel should conform to ASTM Spec.)
FUEL FILTER	Paper Element Type
FUEL LINE (Supply)	1/2" FNPT
FUEL RETURN LINE	1/2" FNPT

ELECTRICAL SYSTEM

BATTERY CHARGE ALTERNATOR	30 Amps at 24V
STARTER MOTOR	24V
RECOMMENDED BATTERY	2 x 12V
GROUND POLARITY	Negative

SD275/SD300

OPERATING DATA	STANDBY				PRIME										
	SD275		SD300		SD275		SD300								
GENERATOR OUTPUT VOLTAGE/KW-60Hz 120/208V, 3-phase, 0.8 pf 120/240V, 3-phase, 0.8 pf 277/480V, 3-phase, 0.8 pf 600V, 3-phase, 0.8 pf	kW	Rated AMP	kW	Rated AMP	kW	Rated AMP	kW	Rated AMP							
NOTE: Consult your Generac dealer for additional voltages.	275	955	300	1042	233	809	245	851							
	275	828	300	903	233	701	245	738							
	275	414	300	452	233	351	245	369							
	275	331	300	361	233	281	245	295							
GENERATOR OUTPUT VOLTAGE/KVA-50Hz 115/200V, 3-phase, 0.8 pf 100/200V, 3-phase, 0.8 pf 231/400V, 3-phase, 0.8 pf 480V, 3-phase, 0.8 pf	kVA	Rated AMP	kVA	Rated AMP	kVA	Rated AMP	kVA	Rated AMP							
NOTE: Consult your Generac dealer for additional voltages.	275	795	300	867	233	673	245	708							
	275	795	300	867	233	673	245	708							
	275	397	300	434	233	337	245	354							
	275	331	300	361	233	281	245	295							
MOTOR STARTING KVA Maximum at 35% instantaneous voltage dip with standard alternator - 50/60Hz with optional alternator - 50/60Hz	220/240V	400/480V	220/240V	400/480V	220/240V	400/480V	220/240V	400/480V							
	654/785 KVA	910/1092 KVA	654/785 KVA	910/1092 KVA	654/785 KVA	910/1092 KVA	654/785 KVA	910/1092 KVA							
	800/960 KVA	1116/1340 KVA	800/960 KVA	1116/1340 KVA	800/960 KVA	1116/1340 KVA	800/960 KVA	1116/1340 KVA							
FUEL Fuel consumption—60 Hz Fuel consumption—50 Hz Fuel pump lift	% Load gal./hr. liters/hr.	25% 5.5 20.8	50% 10.2 38.6	75% 15.0 56.8	100% 20.3 76.8	% Load gal./hr. liters/hr.	25% 5.1 19.3	50% 9.2 34.4	75% 13.4 49.6	100% 17.6 65.5	% Load gal./hr. liters/hr.	25% 4.7 17.8	50% 8.4 31.8	75% 12.2 46.2	100% 16.0 60.6
		80		80			80		80			80		80	
COOLING Coolant capacity Coolant flow/min. Coolant flow/min. Heat rejection to coolant 60 Hz Heat rejection to coolant 50 Hz Inlet air Max. air temp. onto radiator Max. ambient temperature Max. external pressure drop on radiator	System - lit./gal. Engine - lit./gal. Radiator - lit./gal. 60 Hz - lit./gal. 50 Hz - lit./gal. 60 Hz - BTU/hr. 50 Hz-BTU/hr. 60 Hz - m ³ /min. (cfm) 50 Hz - m ³ /min. (cfm) °C (°F) °C (°F) in. H ₂ O	59.8 (15.8) 22.7 (6.0) 37.1 (9.8) 363 (96.0) 303 (80.0) 426,000 398,000 680 (24,000) 566 (20,000) 50 (122) 54 (130) 1.0	59.8 (15.8) 22.7 (6.0) 37.1 (9.8) 363 (96.0) 303 (80.0) 465,000 414,000 680 (24,000) 566 (20,000) 50 (122) 54 (130) 1.0	59.8 (15.8) 22.7 (6.0) 37.1 (9.8) 363 (96.0) 303 (80.0) 360,000 346,000 680 (24,000) 566 (20,000) 50 (122) 54 (130) 1.0	59.8 (15.8) 22.7 (6.0) 37.1 (9.8) 363 (96.0) 303 (80.0) 378,000 375,000 680 (24,000) 566 (20,000) 50 (122) 54 (130) 1.0										
COMBUSTION AIR REQUIREMENTS Flow at rated power 60 Hz Flow at rated power 50 Hz	m ³ /min. (cfm) m ³ /min. (cfm)	28.2 (996) 24.1 (850)	30.3 (1070) 24.8 (876)	25.6 (904) 24.6 (869)	26.8 (946) 22.8 (805)										
EXHAUST Exhaust flow at rated output Maximum recommended back pressure Exhaust temperature at rated output Exhaust outlet size	60 Hz - m ³ /min. (cfm) 50 Hz - m ³ /min. (cfm) Kpa (" Hg) °C (°F) mm. (in)	66.7 (2355) 59.2 (2089) 10.2 (3.0) 443 (829) 127 (5.0)	72.5 (2562) 61.8 (2183) 10.2 (3.0) 443 (829) 127 (5.0)	58.2 (2055) 61.1 (2159) 10.2 (3.0) 418 (784) 127 (5.0)	26.8 (2169) 54.7 (1932) 10.2 (3.0) 418 (784) 127 (5.0)										
ENGINE Rated RPM HP at rated KW Piston speed BMEP	60 Hz / 50 Hz 60 Hz / 50 Hz 60 Hz - m/sec. (ft./min) 50 Hz - m/sec. (ft./min) 60 Hz / 50 Hz - psi	1800 / 1500 475 / 425 9.6 (1890) 8.0 (1575) 269 / 288	1800 / 1500 490 / 430 9.6 (1890) 8.0 (1575) 277 / 292	1800 / 1500 438 / 368 9.6 (1890) 8.0 (1575) 240 / 288	1800 / 1500 424 / 368 9.6 (1890) 8.0 (1575) 240 / 250										
POWER ADJUSTMENT FOR AMBIENT CONDITIONS Temperature Altitude	-1% for every 5.5°C above - C° -1% for every 10°F above - F° -1.5% for every 305 m above - m -1.5% for every 1000 ft. above - ft.	40 104 1890 6200	40 104 1321 5000	40 104 1890 6200	40 104 1321 5000										

STANDARD ENGINE & SAFETY FEATURES

SD275/SD300

- 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
- Factory-Installed Cool Flow Radiator
- Closed Coolant System
- UV/Ozone Resistant Hoses
- Rubber-Booted Engine Electrical Connections
- Stainless Steel Flexible Exhaust Connection
- Battery Charge Alternator
- Battery Cables
- Battery Tray
- Vibration Isolation between Unit Base and Structure
- 24 Volt, Solenoid-activated Starter Motor
- Air Cleaner
- Fan Guard
- Control Console
- Isochronous Governor
- Jacket Water Heater
- Radiator Duct Adaptor

CONTROL CONSOLE

- **STANDARD "E" CONTROL PANEL** (see bulletin #0161310SBY) The "E" control panel is programmable engine control and monitoring system. It allows the user to customize the generator starting and running sequence, monitor engine parameters and configure the alarms. This can be done either through its own LCD display and keypad, or using a PC and RS232 or RS485 serial communications.

OPTIONS

■ OPTIONAL COOLING SYSTEM ACCESSORIES

- 208/240V Coolant Heater

■ OPTIONAL FUEL ACCESSORIES

- Base Tank Low Fuel Alarm
- Primary Fuel Filters
- UL Listed Fuel Tanks
- Electric Fuel Transfer Pump System

■ OPTIONAL ELECTRICAL ACCESSORIES

- 10A Dual Rate Battery Charger
- Battery, 24 Volt
- Battery Warmer

■ OPTIONAL ALTERNATOR ACCESSORIES

- Alternator Upsizing
- Alternator Heater
- Main Line Circuit Breaker

■ OPTIONAL ENCLOSURES

- Weather Protective
- Sound Attenuated
- Aluminum and Stainless Steel
- Enclosed Muffler

■ OPTIONAL EXHAUST ACCESSORIES

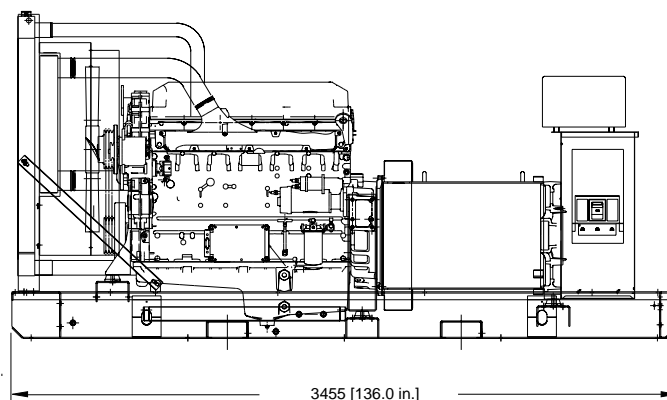
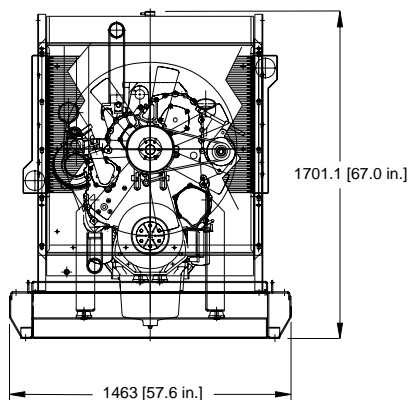
- Critical Exhaust Silencer

■ ADDITIONAL OPTIONAL EQUIPMENT

- Automatic Transfer Switch
- 20 Light Remote Annunciator
- Remote Relay Panel
- Oil Make-Up System
- Oil Heater
- Export Boxing
- 5 Year Warranties
- GenLink® Communications Software

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.



mm [in]

DRY WEIGHT: 6000lbs.

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