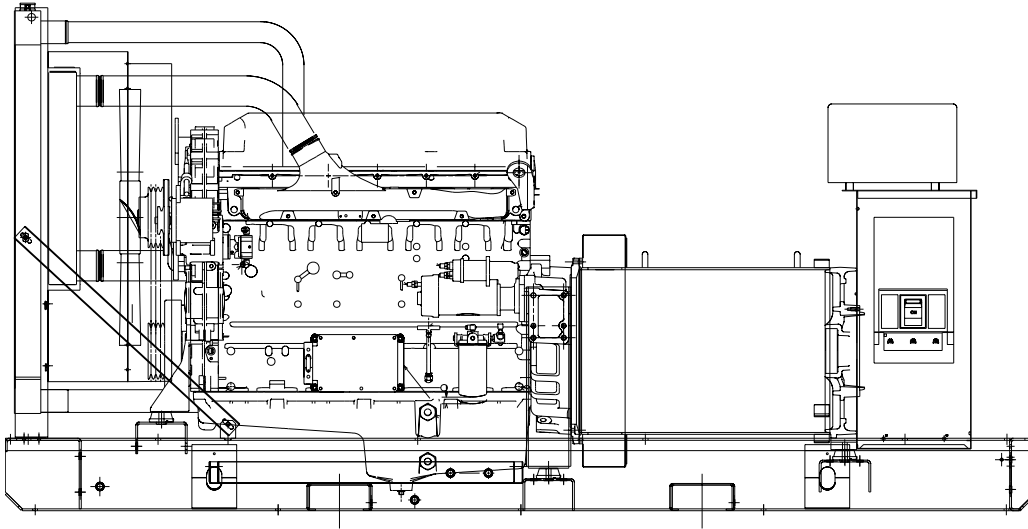


SD350

Liquid Cooled Diesel Engine Generator Sets

Standby Power Rating
350KW 60Hz / 350KVA 50Hz

Prime Power Rating
260KW 60Hz / 275KVA 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

SD350

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 (SAE 1548)

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	8
DIAMETER OF FAN - mm/(in.)	991 (39.0)
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

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).

SD350

OPERATING DATA	STANDBY				PRIME			
	SD350				SD350			
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 <small>NOTE: Consult your Generac dealer for additional voltages.</small>	kW		Rated AMP		kW		Rated AMP	
	350		1216		260		903	
	350		1054		260		783	
	350		527		260		391	
	350		421		260		313	
GENERATOR OUTPUT VOLTAGE/KVA—50Hz 220/380V, 3-phase, 0.8 pf 230/400V, 3-phase, 0.8 pf 260/415V, 3-phase, 0.8 pf <small>NOTE: Consult your Generac dealer for additional voltages.</small>	kVA		Rated AMP		kVA		Rated AMP	
	350		532		275		418	
	350		505		275		397	
	350		487		275		383	
MOTOR STARTING Locked rotor kva at 35% instantaneous voltage dip with standard alternator; 60 Hz-kva Locked rotor kva with 35% instantaneous voltage dip and standard alternator; 50 Hz	480V		208		480V		208	
	1340		960		1340		960	
	380V		415V		380V		415V	
	830		1060		830		1060	
FUEL Fuel consumption—60 Hz % Load gal./hr. liters/hr. Fuel consumption—50 Hz % Load gal./hr. liters/hr. Fuel pump lift in.	25%	50%	75%	100%	25%	50%	75%	100%
	6.6	12.2	18.2	25.5	6.1	11.0	15.9	21.3
	25.0	46.2	68.9	96.5	23.1	41.6	60.1	80.6
	5.9	10.8	15.9	21.5	5.3	9.6	14.0	18.3
	22.3	40.9	60.2	81.4	20.1	36.3	53.0	69.3
			80				80	
COOLING Coolant capacity System - lit./gal. Engine - lit./gal. Radiator - lit./gal. Coolant flow/min. 60 Hz - lit./gal. Coolant flow/min. 50 Hz - lit./gal. Heat rejection to coolant 60 hz -BTU/hr. 50 Hz-BTU/hr. Inlet air 60 Hz - m ³ /min. (cfm) 50 Hz - m ³ /min. (cfm) Max. air temp. on radiator °C (°F) Max. ambient temperature °C (°F) Max. external pressure drop on radiator in. H ₂ O								
			76.8 (20.35)				76.8 (20.35)	
			22.7 (6.0)				22.7 (6.0)	
			54.1 (14.35)				54.1 (14.35)	
			363 (96.0)				363 (96.0)	
			303 (80.0)				303 (80.0)	
			540,000				540,000	
			462,000				462,000	
			792.9 (28,000)				792.9 (28,000)	
			651.3 (23,000)				651.3 (23,000)	
			50 (122)				50 (122)	
			54 (130)				54 (130)	
			1				1	
COMBUSTION AIR REQUIREMENTS Flow at rated power 60 Hz - m ³ /min. (cfm) 50 Hz - m ³ /min. (cfm)								
			34.1 (1204)				30.3 (1070)	
			26.8 (945)				24.3 (858)	
EXHAUST Exhaust flow at rated output 60 Hz - m ³ /min. (cfm) 50 Hz - m ³ /min. (cfm) Maximum recommended back pressure Kpa (" Hg) Exhaust temperature at rated output °C (°F) Exhaust outlet size mm. (in)								
			84.4 (2980)				71.9 (2538)	
			68.8 (2430)				60.6 (2139)	
			10.2 (3)				10.2 (3)	
			463 (865)				443 (829)	
			127 (5)				127 (5)	
ENGINE Rated RPM 60 Hz / 50 Hz HP at rated KW 60 Hz / 50 Hz Piston speed 60 Hz - m/sec. (ft./min) 50 Hz - m/sec. (ft./min) BMEP 60 Hz / 50 Hz - psi								
			1800 / 1500				1800 / 1500	
			550 / 485				477 / 420	
			9.6 (1890)				9.6 (1890)	
			8.0 (1575)				8.0 (1575)	
			311 / 324				270 / 285	
POWER ADJUSTMENT FOR AMBIENT CONDITIONS Temperature -1% for every 5.5°C above - C° -1% for every 10°F above - F° Altitude -1.5% for every 305 m above - m -1.5% for every 1000 ft. above - ft.								
			25				25	
			77				77	
			183				183	
			600				600	

STANDARD ENGINE & SAFETY FEATURES

SD350

- 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

- 280/240 Coolant Heaters

■ 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 (consult factory)
- Alternator Heater
- Main Line Circuit Breaker

■ OPTIONAL ENCLOSURES

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

■ OPTIONAL EXHAUST ACCESSORIES

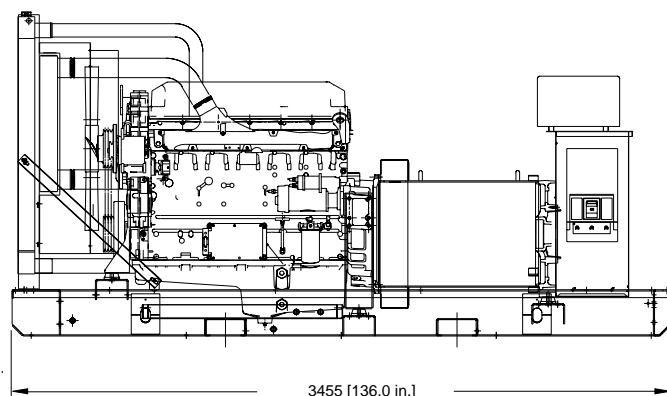
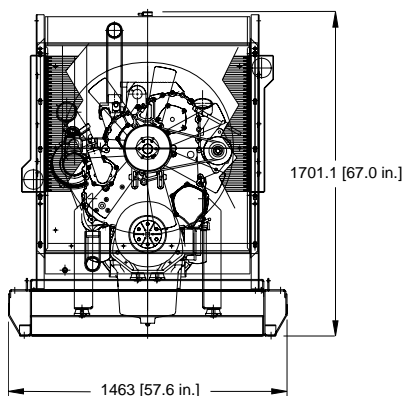
- Critical Exhaust Silencer

■ 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: 6200lbs.

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