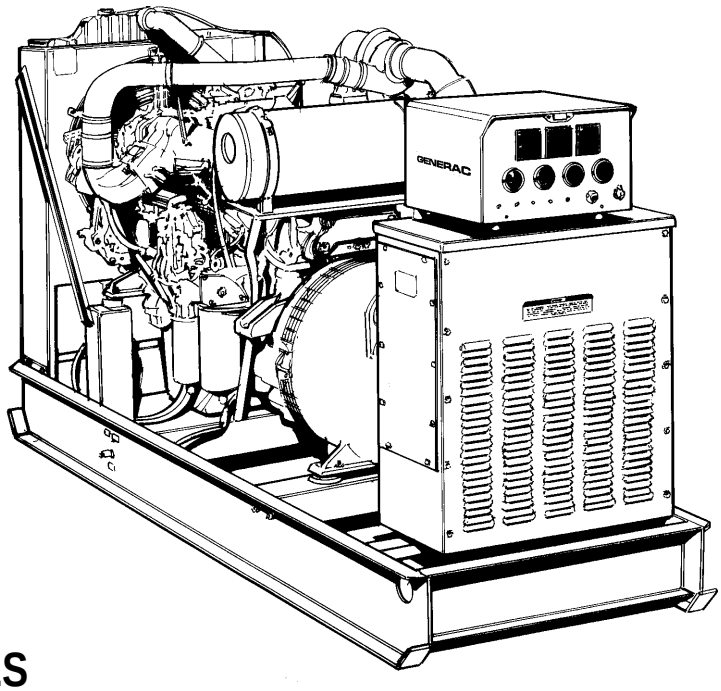
SD180
SD200

Liquid Cooled Diesel Engine Generator Sets

Standby Power Rating
180KW 60Hz/180KVA 50 Hz
200KW 60 Hz/200KVA 50 Hz

Prime Power Rating
147KW 60 Hz/147KVA 50 Hz
163KW 60 Hz/163KVA 50 Hz



Power Matched
GENERAC 13.3DT ENGINE
Turbo-Charged

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.

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

- **GENERAC TRANSFER SWITCHES 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, and controls for total system compatibility.

GENERAC®
POWER SYSTEMS, INC.

APPLICATION & ENGINEERING DATA

GENERATOR SPECIFICATIONS

TYPE ..... Four-pole, revolving field
ROTOR INSULATION ..... Class H
STATOR INSULATION ..... Class H
TOTAL HARMONIC DISTORTION ..... <3.5%
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 PILOT EXCITER ..... Sixteen-pole exciter ✓
Mounted outboard of main bearing ✓
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 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 ..... GENERAC
MODEL 13.3DT
CYLINDERS ..... 6 in-line
DISPLACEMENT ..... 13.267 Liters (809.7 cu. in.)
BORE ..... 137 mm (5.39 in.)
STROKE ..... 150 mm (5.91 in.)
COMPRESSION RATIO 17.9
INTAKE AIR ..... Turbocharged
NUMBER OF MAIN BEARINGS 7
CONNECTING RODS ..... 6-Carbon Steel
CYLINDER HEAD ..... (2) 3-Cylinder Cast Iron with Overhead Valve
PISTONS ..... 6-Heat Resistant Aluminum Alloy
CRANKSHAFT ..... Case Hardened, Die Forged, Carbon Steel

VALVE TRAIN

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

ENGINE GOVERNOR

❒ ELECTRONIC ..... Standard
FREQUENCY REGULATION, NO-LOAD TO FULL LOAD ... 0.5%
STEADY STATE REGULATION ..... ±0.25%

LUBRICATION SYSTEM

TYPE OF OIL PUMP ..... Gear
OIL FILTER ..... Bypass and Full flow, cartridge
CRANKCASE CAPACITY ..... 27 Liters (7.13 U.S. gallons)

COOLING SYSTEM

TYPE OF SYSTEM ..... Pressurized, closed recovery
WATER PUMP ..... Pre-lubed, self-sealing
TYPE OF FAN ..... Pusher
NUMBER OF FAN BLADES 8
DIAMETER OF FAN ..... 650 mm (25.6 in.)
COOLANT HEATER ..... Dual 240V, 1000 W

FUEL SYSTEM

FUEL ..... #2D Fuel (Min Cetane #40)
(Fuel should conform to ASTM Spec.)
FUEL FILTER ..... 10 Micron
FUEL INJECTION PUMP ..... Bosch PE6P Type
FUEL PUMP ..... Mechanical
INJECTORS ..... Multi-hole, nozzle type
ENGINE TYPE ..... Direct injection
FUEL LINE (Supply) ..... 9.53 mm (0.375 in.)
FUEL RETURN LINE ..... 9.53 mm (0.375 in.)

ELECTRICAL SYSTEM

BATTERY CHARGE ALTERNATOR ..... 20 Amps at 24 V
STARTER MOTOR ..... 24 V
RECOMMENDED BATTERY ..... (2)—12V, 135 AH
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.

SD180/200

OPERATING DATA

	STANDBY				PRIME			
	SD180		SD200		SD180		SD200	
GENERATOR OUTPUT VOLTAGE/KW-60Hz		Rated AMP		Rated AMP		Rated AMP		Rated AMP
120/240V, 1-phase, 1.0 pf	120	500	134	558	98	408	108	450
120/208V, 3-phase, 0.8 pf	180	625	200	694	147	510	163	566
120/240V, 3-phase, 0.8 pf	180	541	200	601	147	462	163	490
277/480V, 3-phase, 0.8 pf	180	271	200	301	147	221	163	245
600V, 3-phase, 0.8 pf	180	217	200	241	147	177	163	196
NOTE: Consult your Generac dealer for additional voltages.								
GENERATOR OUTPUT VOLTAGE/KVA-50Hz		Rated AMP		Rated AMP		Rated AMP		Rated AMP
110/220V, 1-phase, 1.0 pf	96	436	107	486	78	355	86	391
115/200V, 3-phase, 0.8 pf	180	520	200	577	147	424	163	471
100/200V, 3-phase, 0.8 pf	162	486	180	520	132	381	147	424
231/400V, 3-phase, 0.8 pf	180	260	200	289	147	212	163	235
NOTE: Consult your Generac dealer for additional voltages.								
MOTOR STARTING								
Maximum KVA with 35% instantaneous voltage dip	231/240V	400/480V	231/240V	400/480V	231/240V	400/480V	231/240V	400/480V
with standard alternator; 50/60 Hz	400/500 KVA	552/690 KVA	400/500 KVA	552/690 KVA	400/500 KVA	552/690 KVA	400/500 KVA	552/690 KVA
with optional alternator; 50/60 Hz	768/960 KVA	1072/1340 KVA	768/960 KVA	1072/1340 KVA	768/960 KVA	1072/1340 KVA	768/960 KVA	1072/1340 KVA
FUEL								
Fuel consumption—60 Hz Load	25%	50%	75%	100%	25%	50%	75%	100%	25%	50%	75%	100%	25%	50%	75%	100%
gal./hr.	3.9	7.9	12.0	16.2	4.3	8.5	12.8	17.1	3.2	6.5	9.8	13.2	3.5	7.0	10.4	13.9
liters/hr.	14.8	29.9	45.4	61.3	16.3	32.2	48.4	64.7	12.1	24.6	37.1	50.0	13.1	26.3	39.4	52.6
Fuel consumption—50 Hz gal./hr.	3.2	6.3	9.6	12.5	3.4	6.8	10.2	13.6	2.6	5.2	7.9	10.4	2.8	5.6	8.3	11.1
liters/hr.	12.1	23.8	36.3	47.3	12.9	25.8	38.6	51.5	9.8	19.7	29.9	39.4	10.5	21.0	31.6	42.1
Fuel pump lift	40"				40"				40"				40"			
COOLING								
Coolant capacity System - lit. (US gal.)	29 (7.5)				29 (7.5)				29 (7.5)				29 (7.5)			
Engine - lit. (US gal.)	21 (5.5)				21 (5.5)				21 (5.5)				21 (5.5)			
Radiator - lit. (US gal.)	8 (2.0)				8 (2.0)				8 (2.0)				8 (2.0)			
Coolant flow/min. 60 Hz - lit. (US gal.)	170 (45)				170 (45)				170 (45)				170 (45)			
50 Hz - lit. (US gal.)	142 (37.5)				142 (37.5)				142 (37.5)				142 (37.5)			
Heat rejection to coolant BTU/hr.	640,000				680,000				512,000				544,000			
Inlet air 60 Hz - m^3/min. (cfm)	402 (14,200)				402 (14,200)				402 (14,200)				402 (14,200)			
50 Hz - m^3/min. (cfm)	335 (11,800)				335 (11,800)				335 (11,800)				335 (11,800)			
Max. operating air temp. onto rad.* °C (°F)	60 (140)				60 (140)				60 (140)				60 (140)			
Max. operating ambient air* °C (°F)	50 (122)				50 (122)				50 (122)				50 (122)			
COMBUSTION AIR REQUIREMENTS								
Flow at rated power 60 Hz - m^3/min. (cfm)	18.9 (667)				19.5 (688)				17.1 (605)				17.3 (611)			
50 Hz - m^3/min. (cfm)	15.7 (556)				16.2 (574)				14.2 (503)				14.4 (509)			
EXHAUST								
Exhaust flow at rated output								
60 Hz - m^3/min. (cfm)	39.7 (1400)				47.7 (1884)				37.1 (1306)				39.9 (1372)			
50 Hz - m^3/min. (cfm)	33 (1179)				38.1 (1343)				31.6 (1112)				31.1 (1098)			
Max recommended back pressure Kpa(Hg)	5.0 (1.5")				5.0 (1.5")				5.0 (1.5")				10 (3")			
Exhaust temp at rated output °C (°F)	510 (950)				532 (990)				510 (950)				489 (913)			
Exhaust outlet size " N.P.T. (female)	5"				5"				5"				5"			
ENGINE								
Rated RPM 60 Hz / 50 Hz	1800 / 1500				1800 / 1500				1800 / 1500				1800 / 1500			
HP at rated KW 60 Hz / 50 Hz	260 / 210				297 / 233				223 / 188				238 / 190			
Piston speed (mean) 60 Hz - m/min. (ft./min.)	540 (1772)				540 (1772)				540 (1772)				540 (1772)			
50 Hz - m/min. (ft./min.)	450 (1476)				450 (1476)				450 (1476)				450 (1476)			
BMEP 60 Hz / 50 Hz	143 / 114				159 / 127				121 / 102				129 / 103			
POWER ADJUSTMENT FOR AMBIENT CONDITIONS								
Temperature -5% for every 10°C above -°C	43				43				43				43			
-2.77% for every 10°F above -°F	110				110				110				110			
Altitude -1.1% for every 100 m above -m	2293				2293				2293				2293			
-3.5% for every 1000 ft. above -ft.	7560				7560				7560				7560			

Note: Values given are maximum temperatures to which power adjustments can be applied. Consult your Generac Power Systems representative if operating conditions exceed these maximums.

STANDARD ENGINE & SAFETY FEATURES

SD180/200

- 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
- 24 Volt, Solenoid-activated Starter Motor
- Air Cleaner
- Fan Guard
- Control Console
- Coolant Heaters Dual 120V 1000W
- Isochronous Governor

OPTIONS

- **OPTIONAL COOLING SYSTEM ACCESSORIES**
  - ❍ Radiator Duct Adapter
  - ❍ Coolant Heater 208/240VAC
- **OPTIONAL FUEL ACCESSORIES**
  - ❍ Flexible Fuel Lines
  - ❍ UL Listed Fuel Tanks
  - ❍ Base Tank Fuel Alarms
  - ❍ Primary Fuel Filter
  - ❍ Primary Fuel Filter with Heater
- **OPTIONAL EXHAUST ACCESSORIES**
  - ❍ Critical Exhaust Silencer
- **OPTIONAL ELECTRICAL ACCESSORIES**
  - ❍ Battery, 12 Volt, 135 A.H., 4D (2 req'd)
  - ❍ Battery, 12 Volt, 225 A.H., 8D (2 req'd)
  - ❍ 2A Battery Charger
  - ❍ 10A Dual Rate Battery Charger
  - ❍ Battery Heater
- **OPTIONAL ALTERNATOR ACCESSORIES**
  - ❍ Alternator Upsizing
  - ❍ Alternator Strip Heater
  - ❍ Alternator Tropicalization
  - ❍ Voltage Changeover Switch
  - ❍ Main Line Circuit Breaker
- **CONTROL CONSOLE OPTIONS**
  - ❍ Analog Control "C" Panel (Bulletin 0151160SBY)
  - ❍ Analog / Digital Control Panel (Bulletin 0161310SBY)
- **ADDITIONAL OPTIONAL EQUIPMENT**
  - ❍ Automatic Transfer Switch
  - ❍ 3 Light Remote Annunciator
  - ❍ 5 Light Remote Annunciator
  - ❍ 20 Light Remote Annunciator
  - ❍ Remote Relay Panels
  - ❍ Unit Vibration Isolators
  - ❍ Oil Make-Up System
  - ❍ Oil Heater
  - ❍ 5 Year Warranties
  - ❍ Export Boxing
  - ❍ GenLink® Communications Software
- **OPTIONAL ENCLOSURES**
  - ❍ Weather Protective
  - ❍ Sound Attenuated
  - ❍ Aluminum and Stainless Steel
  - ❍ Enclosed Muffler

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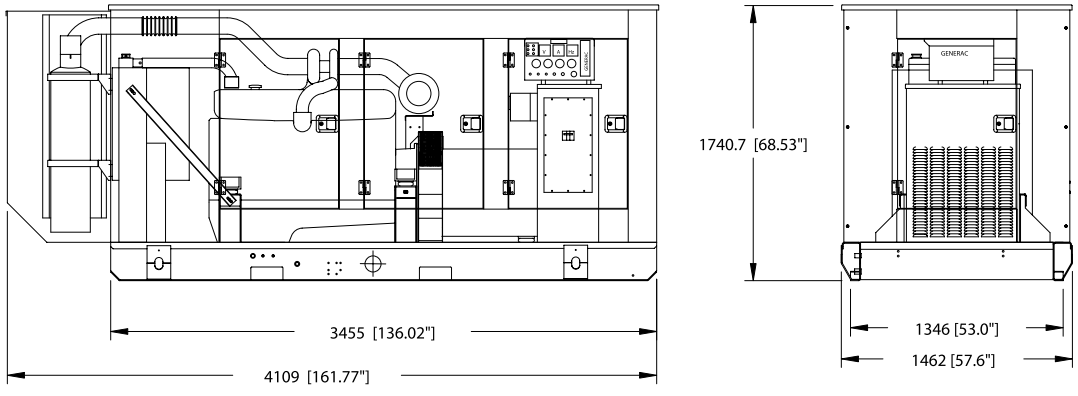
Design and specifications subject to change without notice. Dimensions shown are approximate. Contact your Generac dealer for certified drawings. DO NOT USE THESE DIMENSIONS FOR INSTALLATION PURPOSES.



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WEIGHT: 5500 lbs.

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