GENERAC® | INDUSTRIAL POWER

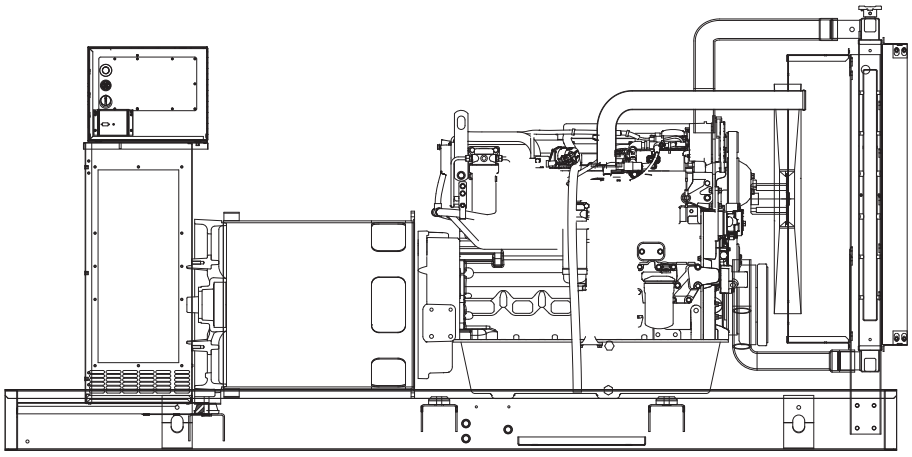
SD300

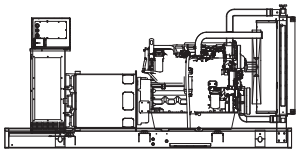
Industrial Diesel Generator Set

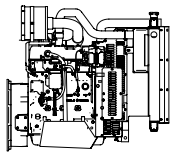
EPA Emissions Certification: Tier III

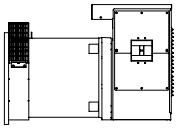
Standby Power Rating
300KW 60 Hz

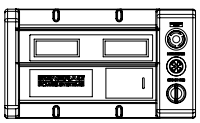
Prime Power Rating
270KW 60 Hz











features benefits

Generator Set

PROTOTYPE & TORSIONALLY TESTED	PROVIDES A PROVEN UNIT
UL2200 TESTED	ENSURES A QUALITY PRODUCT
RHINOCOAT PAINT SYSTEM	IMPROVES RESISTANCE TO ELEMENTS
WIDE RANGE OF ENCLOSURES AND TANKS	PROVIDES A SINGLE SOURCE SOLUTION

Engine

EPA TIER COMPLIANT	ENVIRONMENTALLY FRIENDLY
INDUSTRIAL TESTED, GENERAC APPROVED	ENSURES INDUSTRIAL STANDARDS
POWER-MATCHED OUTPUT	ENGINEERED FOR PERFORMANCE
INDUSTRIAL GRADE	IMPROVES LONGEVITY AND RELIABILITY

Alternator

TWO-THIRDS PITCH	ELIMINATES HARMFUL 3RD HARMONIC
LAYER WOUND ROTOR & STATOR	IMPROVES COOLING
CLASS H MATERIALS	HEAT TOLERANT DESIGN
DIGITAL 3-PHASE VOLTAGE CONTROL	FAST AND ACCURATE RESPONSE

Controls

ENCAPSULATED BOARD W/ SEALED HARNESS	EASY, AFFORDABLE REPLACEMENT
4-20mA VOLTAGE-TO-CURRENT SENSORS	NOISE RESISTANT 24/7 MONITORING
SURFACE-MOUNT TECHNOLOGY	PROVIDES VIBRATION RESISTANCE
ADVANCED DIAGNOSTICS & COMMUNICATIONS	HARDENED RELIABILITY

primary codes and standards

NEMA · cULus LISTED · NFPA · ASTM INTERNATIONAL · ISO · ICC

SD300 application and engineering data

ENGINE SPECIFICATIONS

General

Make	Iveco/FPT		
EPA Emissions Compliance	Tier III		
EPA Emissions Engine Reference	See Emissions Data Sheet		
Cylinder #	6		
Type	In-Line		
Displacement - L (cu. in.)	10.3		
Bore - mm (in.)	125	(4.92)	
Stroke - mm (in.)	140	(5.51)	
Compression Ratio	16.5:1		
Intake Air Method	Turbocharged/Aftercooled		
Connecting Rod Type	Dropped Forged Steel		
Cylinder Head Type	4-Valve		
Piston Type	Aluminum		

Engine Governing

Governor	Electronic Isochronous
Frequency Regulation (Steady State)	+/- 0.25%

Lubrication System

Oil Pump Type	Gear		
Oil Filter Type	Full-Flow		
Crankcase Capacity - L (gal)(qts)	30	(7.92)	(31.68)

Cooling System

Cooling System Type	Closed Recovery	
Water Pump	Pre-Lubed, Self Sealing	
Fan Type	Pusher	
Fan Speed	2250	
Fan Diameter mm (in.)	762	(30.0)
Coolant Heater Wattage	2000	
Coolant Heater Standard Voltage	240VAC	

Fuel System

Fuel Type*	#2 Diesel LS or ULS	
Fuel Specifications	ASTM	
Fuel Filtering (microns)	5	
Fuel Inject Pump Make	Electronic	
Fuel Pump Type	Engine Driven Gear	
Injector Type	Common Rail	
Engine Type	Pre-Combustion	
Fuel Supply Line - NPT - mm (in.)	12.7	(0.50)
Fuel Return Line - mm (in.)	12.7	(0.50)

* LS-Low Sulphur, ULS-Ultra Low Sulfur

Engine Electrical System

System Voltage	24VDC
Battery Charging Alternator (Amps)	90
Battery Size (at 0 oC)	995
Battery Group	31
Battery Voltage	(2) 12VDC
Ground Polarity	Negative

ALTERNATOR SPECIFICATIONS

Standard Model	520
Poles	4
Field Type	Revolving
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion	< 5%
Telephone Interference Factor (TIF)	< 50
Standard Excitation	Permanent Magnet
Bearings	Single Sealed Cartridge
Coupling	Direct, Flexible Disc
Load Capacity - Standby	100%
Load Capacity - Prime	110%
Prototype Short Circuit Test	Y

Voltage Regulator Type	Digital
Number of Sensed Phases	All
Regulation Accuracy (Steady State)	+/- 1.0%

CODES AND STANDARDS COMPLIANCE (WHERE APPLICABLE)

NFPA 99
NFPA 110
ISO 8528-5
ISO 1708A.5
ISO 3046
BS5514
SAE J1349
DIN6271
IEEE C62.41 TESTING
NEMA ICS 1

Rating Definitions:
Standby – Applicable for a varying emergency load for the duration of a utility power outage with no overload capability. (Max. load factor = 70%)
Prime – Applicable for supplying power to a varying load in lieu of utility for an unlimited amount of running time. (Max. load factor = 80%) A 10% overload capacity is available for 1 out of every 12 hours.

SD300 operating data (60Hz)

POWER RATINGS (kW)

	STANDBY			PRIME		
Single-Phase 120/240VAC @1.0pf	300	Amps:	1250	270	Amps:	1125
Three-Phase 120/208VAC @0.8pf	300	Amps:	1041	270	Amps:	937
Three-Phase 120/240VAC @0.8pf	300	Amps:	902	270	Amps:	812
Three-Phase 277/480VAC @0.8pf	300	Amps:	451	270	Amps:	406
Three-Phase 346/600VAC @0.8pf	300	Amps:	361	270	Amps:	325

STARTING CAPABILITIES (sKVA)

sKVA vs. Voltage Dip

			480VAC						208/240VAC					
	Alternator*	kW	*10%*	*15%*	*20%*	*25%*	*30%*	*35%*	*10%*	*15%*	*20%*	*25%*	*30%*	*35%*
○	Standard	300	303	454	605	757	908	1059	227	341	454	568	681	794
○	Upsize 1	350	383	575	767	958	1150	1342	280	410	535	640	770	900
○	Upsize 2	400	387	581	775	968	1162	1356	271	407	543	679	814	950

*All Generac industrial alternators utilize Class H materials. Standard alternator provides less than or equal to Class F temperature rise. Upsize 1 provides less than or equal to Class B temperature rise. Upsize 2 provides less than or equal to Class A temperature rise.

FUEL

Fuel Pump Lift - in (m)
36(.9)

Total Fuel Requirement (Combustion + Cooling)
31 gph

Fuel Consumption Rates

STANDBY				PRIME			
Percent Load	gph	gpm	lph	Percent Load	gph	gpm	lph
25%	6.6	0.11	25.0	25%	6.0	0.10	22.7
50%	12.5	0.21	47.3	50%	11.4	0.19	43.1
75%	17.8	0.30	67.4	75%	16.2	0.27	61.3
100%	22.1	0.37	83.6	100%	20.1	0.34	76.1

COOLING

Coolant System Capacity - Gal (L)
10.3 (39.91)

Maximum Radiator Backpressure
1.5" H_2O Column

		STANDBY	PRIME
Coolant Flow per Minute	gpm (lpm)	79.2 (300)	79.2 (300)
Heat rejection to Coolant	BTU/min	7143	6429
Inlet Air	cfm (m3/hr)	19070 (32404)	19070 (32404)
Max. Operating Radiator Air Temp	°F (°C)	122 (50)	122 (50)
Max. Operating Ambient Temperature	°F (°C)	104 (40)	104 (40)

COMBUSTION AIR REQUIREMENTS

		STANDBY		PRIME	
Intake Flow at Rated Power	cfm (m3/min)	850	(24.07)	765	(21.67)

EXHAUST

		STANDBY	PRIME
Exhaust Flow (Rated Output)	cfm (m3/hr)	2240 (63.4)	2016 (57.1)
Maximum Backpressure	inHg (Kpa)	1.5 (5.1)	1.5 (5.1)
Exhaust Temp (Rated Output)	°F (°C)	1020 (549)	918 (492)

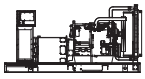
ENGINE

		STANDBY	PRIME
Rated Engine Speed	rpm	1800	1800
Horsepower at Rated kW (EPA)	hp	449	449
Piston Speed	ft/min (m/min)	1654 (65)	1654 (65)
BMEP	psi	336	302

Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions. Please consult a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528 and DIN6271 standards.

SD300

standard features and options



GENERATOR SET

● Genset Vibration Isolation	Std
○ Seismic Rated Vibration Isolators	Opt
○ Extended warranty	Opt
○ Export boxing	Opt
○ Gen-Link Communications Software	Opt
○ Steel Enclosure	Opt
○ Aluminum Enclosure	Opt

ENGINE SYSTEM

General

● Oil Drain Extension	Std
○ Oil Make-Up System	Opt
○ Oil Heater	Opt

Fuel System

● Fuel lockoff solecnoid	Std
● Secondary fuel filter	Std
● Stainless steel flexible exhaust connection	Std
● Industrial Exhaust Silencer	Std
○ Critical Exhaust Silencer	Opt
○ Flexible fuel lines	Opt
○ Primary fuel filter	Opt
○ Single Wall Tank (Export Only)	-
○ UL 142 Fuel Tank	Opt
○ Internal Base Tank	

Cooling System

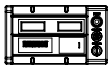
○ 120VAC Coolant Heater	Opt
○ 208VAC Coolant Heater	Opt
○ 240VAC Coolant Heater	Opt
○ Other Coolant Heater_____	-
● Closed Coolant Recovery System	Std
● UV/Ozone resistant hoses	Std
● Factory-Installed Radiator	Std
● Radiator Drain Extension	Std

Engine Electrical System

● Battery charging alternator	Std
● Battery cables	Std
● Battery tray	Std
○ Battery box	Opt
○ Battery heater	Opt
● Solenoid activated starter motor	Std
● Air cleaner	Std
● Fan guard	Std
● Radiator duct adapter	Std
○ 2A battery charger	Opt
○ 10A UL float/equalize battery charger	Opt
● Rubber-booted engine electrical connections	Std

ALTERNATOR SYSTEM

● UL2200 Generator Protector	Std
○ Main Line Circuit Breaker	Opt
○ 2nd Circuit Breaker	Opt
○ 3rd Circuit Breaker	-
○ Alternator Upsizing	Opt
○ Anti-Condensation Heater	Opt
○ Tropical coating	Opt
○ Voltage changeover switch	-



CONTROL SYSTEM

Control Panel

● Digital H Control Panel - Dual 4x20 Display	Std
○ Digital G-100 Control Panel - Touchscreen	na
○ Digital G-200 Paralleling Control Panel - Touchscreen	na
● Programmable Crank Limiter	Std
○ 21-Light Remote Annunciator	Opt
○ Remote Relay Panel (8 or 16)	Opt
● 7-Day Programmable Exerciser	Std
● Special Applications Programmable PLC	Std
● RS-232	Std
● RS-485	Std
● All-Phase Sensing DVR	Std
● Full System Status	Std
● Utility Monitoring (Req. H-Transfer Switch)	Std
● 2-Wire Start Compatible	Std
● Power Output (kW)	Std
● Power Factor	Std
● Reactive Power	Std
● All phase AC Voltage	Std
● All phase Currents	Std
● Oil Pressure	Std
● Coolant Temperature	Std
● Coolant Level	Std
○ Oil Temperature	Opt
● Fuel Pressure	Std
● Engine Speed	Std
● Battery Voltage	Std
● Frequency	Std
● Date/Time Fault History (Event Log)	Std
● UL2200 Generator Protector	Std
○ Low-Speed Exercise	-
● Isochronous Governor Control	Std
● -40deg C - 70deg C Operation	Std
● Waterproof Plug-In Connectors	Std
● Audible Alarms and Shutdowns	Std
● Not in Auto (Flashing Light)	Std
● On/Off/Manual Switch	Std
● E-Stop (Red Mushroom-Type)	Std
○ Remote E-Stop (Break Glass-Type, Surface Mount)	Opt
○ Remote E-Stop (Red Mushroom-Type, Surface Mount)	Opt
○ Remote E-Stop (Red Mushroom-Type, Flush Mount)	Opt
● NFPA 110 Level I and II (Programmable)	Std
● Remote Communication - RS232	Std
○ Remote Communication - Modem	Opt
○ Remote Communication - Ethernet	Opt
○ 10A Run Relay	Opt

Alarms (Programmable Tolerances, Pre-Alarms and Shutdowns)

○ Low Fuel	Opt
● Oil Pressure (Pre-programmed Low Pressure Shutdown)	Std
● Coolant Temperature (Pre-programmed High Temp Shutdov	Std
● Coolant Level (Pre-programmed Low Level Shutdown)	Std
● Oil Temperature	Std
● Fuel Pressure	Std
● Engine Speed (Pre-programmed Overspeed Shutdown)	Std
● Voltage (Pre-programmed Overvoltage Shutdown)	Std
● Battery Voltage	Std

Other Options

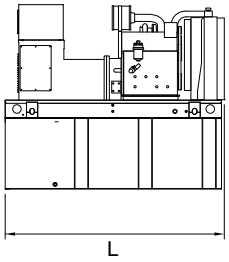
○ _____

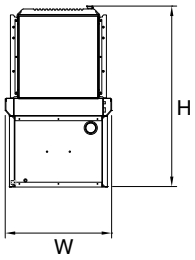
○ _____

○ _____

SD300

dimensions, weights and sound levels

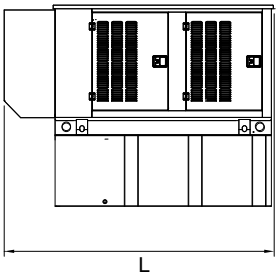


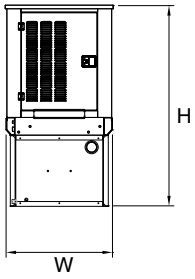


OPEN SET

TANK SIZE

REQ GALLONS	HOURS	L	W	H	WT	dBA*
NO TANK	NO TANK	136	58	69	5601	91
177	8	136	58	82	6549	
265	12	136	58	94	6861	
530	24	136	58	106	7164	
796	36	208	58	110	8626	
1061	48	278	58	110	9891	
1591	72	CALL	CALL	CALL	CALL	
2122	96	CALL	CALL	CALL	CALL	

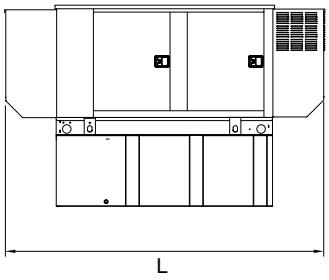


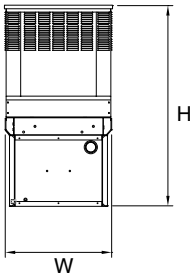


WEATHERPROOF ENCLOSURE

TANK SIZE

REQ GALLONS	HOURS	L	W	H	WT	dBA*
NO TANK	NO TANK	174	58	75	6901	87
177	8	174	58	88	7849	
265	12	174	58	100	8161	
530	24	174	58	112	8464	
796	36	246	58	116	9926	
1061	48	316	58	116	11191	
1591	72	CALL	CALL	CALL	CALL	
2122	96	CALL	CALL	CALL	CALL	

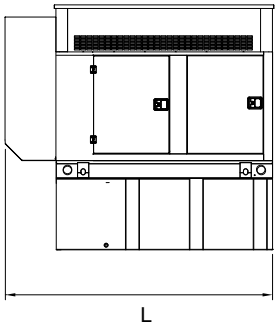


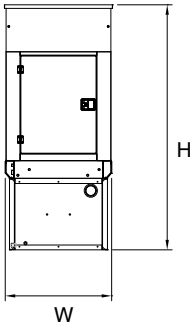


LEVEL 1 SOUND ENCLOSURE

TANK SIZE

REQ GALLONS	HOURS	L	W	H	WT	dBA*
NO TANK	NO TANK	200	58	75	7093	82
177	8	200	58	88	8041	
265	12	200	58	100	8353	
530	24	200	58	112	8656	
796	36	272	58	116	10118	
1061	48	342	58	116	11383	
1591	72	CALL	CALL	CALL	CALL	
2122	96	CALL	CALL	CALL	CALL	





LEVEL 2 SOUND ENCLOSURE

TANK SIZE

REQ GALLONS	HOURS	L	W	H	WT	dBA*
NO TANK	NO TANK	181	58	105	7301	72
177	8	181	58	118	8249	
265	12	181	58	130	8561	
530	24	181	58	142	8864	
796	36	253	58	146	10326	
1061	48	323	58	146	11591	
1591	72	CALL	CALL	CALL	CALL	
2122	96	CALL	CALL	CALL	CALL	

*All measurements are approximate and for estimation purposes only. Required gallons based on 100% of standby rating. Weights are without fuel in tank. Sound levels measured at 23ft (7m) and does not account for ambient site conditions.

Tank Options

MDEQ	OPT
Florida DERM/DEP	OPT
Chicago Fire Code	OPT
IFC Certification	CALL
ULC	CALL

Other Custom Options Available from your Generac Industrial Power Dealer

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

Specification characteristics may change without notice. Dimensions and weights are for preliminary purposes only. Please consult a Generac Power Systems Industrial Dealer for detailed installation drawings.