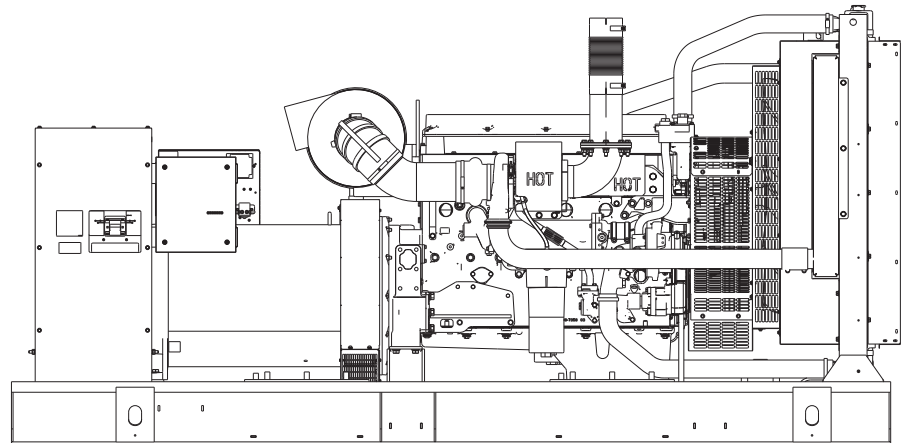


SD400

Industrial Diesel Generator Set

EPA Certified Stationary Emergency

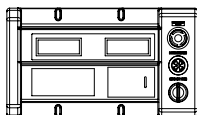
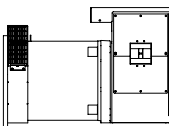
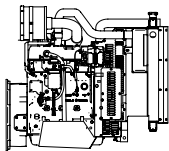
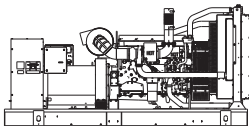
Standby Power Rating
500kVA 400kW 60Hz



Generator image used for illustration purposes only

features

benefits



Generator Set

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

Engine

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

Alternator

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

Controls

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

primary codes and standards



SD400

application and engineering data

ENGINE SPECIFICATIONS**General**

Make	Perkins
EPA Emissions Compliance	Stationary Emergency
EPA Emissions Reference	See Emissions Data Sheet
Cylinder #	6
Type	In-Line
Displacement - L	12.5
Bore - mm (in.)	130 (5.12)
Stroke - mm (in.)	157 (6.18)
Compression Ratio	16.3:1
Intake Air Method	Turbocharged/Aftercooled
Cylinder Head Type	4 - Valve
Piston Type	Aluminium
Connecting Rod Type	Drop Forged Steel

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 (qts)	38 (40.15)

Cooling System

Cooling System Type	Closed Recovery
Water Pump	Pre-Lubed, Self Sealing
Fan Type	Pusher
Fan Speed (rpm)	1656 rpm
Fan Diameter mm (in.)	927 (36.5)
Coolant Heater Standard Wattage	1500
Coolant Heater Standard Voltage	120VAC

Fuel System

Fuel Type	Ultra Low Sulfur Diesel #2
Fuel Specifications	ASTM
Fuel Filtering (microns)	Primary 10 - Secondary 2
Fuel Injection	Electronic
Fuel Pump Type	Engine Driven Gear
Injector Type	MEUI
Engine Type	Pre-Combustion
Fuel Supply Line	½" NPT
Fuel Return Line	½" NPT

Engine Electrical System

System Voltage	24VDC
Battery Charging Alternator	Std
Battery Size (at 0°C)	1155 CCA
Battery Group	8D
Battery Voltage	(2) - 12VDC
Ground Polarity	Negative

ALTERNATOR SPECIFICATIONS

Standard Model	520 mm Generac
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 Magnent
Bearings	Single Sealed Cartridge
Coupling	Direct, Flexible Disc
Load Capacity - Standby	100%
Prototype Short Circuit Test	Yes

Voltage Regulator Type	Digital
Number of Sensed Phases	All
Regulation Accuracy (Steady State)	± 1%

CODES AND STANDARDS COMPLIANCE (WHERE APPLICABLE)

NFPA 99	BS5514
NFPA 110	SAE J1349
ISO 8528-5	DIN6271
ISO 1708A.5	IEEE C62.41 TESTING
ISO 3046	NEMA ICS 1
ETL certified to UL2200 Standards	

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.

SD400

operating data (60Hz)

POWER RATINGS (kW)

STANDBY

Three-Phase 120/208VAC @0.8pf	400 kW	Amps: 1389
Three-Phase 120/240VAC @0.8pf	400 kW	Amps: 1204
Three-Phase 277/480VAC @0.8pf	400 kW	Amps: 602
Three-Phase 346/600VAC @0.8pf	400 kW	Amps: 481

STARTING CAPABILITIES (sKVA)

sKVA vs. Voltage Dip

Alternator	kW	480VAC						208/240VAC					
		10%	15%	20%	25%	30%	35%	10%	15%	20%	25%	30%	35%
Standard	400	387	581	775	968	1162	1356	210	350	500	680	875	1100
Upsize 1	442	475	720	915	1145	1030	1290	-	-	-	-	-	-
Upsize 2	555	457	686	914	1143	1371	1600	-	-	-	-	-	-

FUEL

Fuel Consumption Rates*

STANDBY

Fuel Pump Lift - in (mm)	36 (900)
Total Fuel Pump Flow (Combustion + Return)	32 gph

Percent Load	gph	lph
25%	9.8	37.1
50%	16.7	63.2
75%	23.1	87.4
100%	27.8	105.4

* Refer to "Emissions Data Sheet" for maximum fuel flow for EPA and SCAQMD permitting purposes.

COOLING

STANDBY

Coolant Flow per Minute	gpm (lpm)	106.2 (402)
Heat Rejection to Coolant	BTU/hr	1,067,520
Inlet Air	cfm (m3/min)	18,685 (529.1)
Max. Operating Radiator Air Temp	F° (C°)	122 (50)
Max. Operating Ambient Temperature	F° (C°)	104 (40)
Coolant System Capacity	gal (L)	13 (49.2)
Maximum Radiator Backpressure	in H ₂ O	0.5

COMBUSTION AIR REQUIREMENTS

STANDBY

Flow at Rated Power cfm (m3/min) **1180 (33.41)**

ENGINE

STANDBY

Rated Engine Speed	rpm	1800
Horsepower at Rated kW**	hp	619
Piston Speed	ft/min	1854
BMEP	psi	334

** Refer to "Emissions Data Sheet" for maximum bHP for EPA and SCAQMD permitting purposes.

EXHAUST

STANDBY

Exhaust Flow (Rated Output)	cfm (m ³ /min)	3044 (86.2)
Max. Backpressure (Post Silencer)	inHg (Kpa)	1.5 (5.1)
Exhaust Temp (Rated Output)	°F (°C)	1256 (680)
Exhaust Outlet Size (Open Set)	NPT (male)	127 (5.0)

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.

SD400

standard features and options

GENERATOR SET

- Genset Vibration Isolation Std
- IBC/OSHPD Seismic Certified Opt
- Extended warranty 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
 - Air cleaner Std
 - Fan guard Std
 - Radiator duct adapter Std
 - Stainless steel flexible exhaust connection Std
 - Industrial Exhaust Silencer Std
 - Critical Exhaust Silencer Opt
- Fuel System
- Secondary fuel filter Std
 - Flexible fuel lines Opt
 - Primary fuel filter Std
 - Single Wall Tank (Export Only) -
 - UL 142 Fuel Tank Opt
- Cooling System
- 120VAC Coolant Heater Std
 - 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
 - 10A UL float/equalize battery charger Opt
 - Rubber-booted engine electrical connections Std

ALTERNATOR SYSTEM

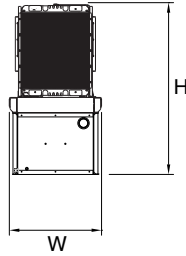
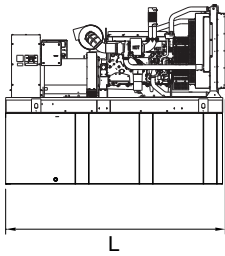
- GENprotect™ Std
- Main Line Circuit Breaker Opt
- 2nd Circuit Breaker Opt
- 3rd Circuit Breaker -
- Alternator Upsizing Opt
- Anti-Condensation Heater Opt
- Tropical coating Opt
- Permanent Magnet Generator Std

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) Opt
 - 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
 - Engine Speed Std
 - Battery Voltage Std
 - Frequency Std
 - Date/Time Fault History (Alarm & Event Log) 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
 - Auto/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 Shutdown) Std
 - Coolant Level (Pre-programmed Low Level Shutdown) Std
 - Oil Temperature Opt
 - Engine Speed (Pre-programmed Overspeed Shutdown) Std
 - Voltage (Pre-programmed Overvoltage Shutdown) Std
 - Battery Voltage Std
- Other Options
- -
 -

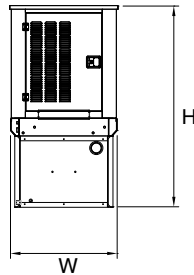
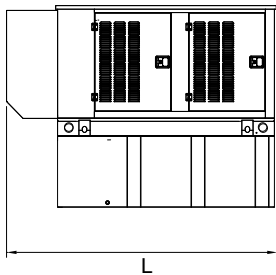
SD400

dimensions, weights and sound levels



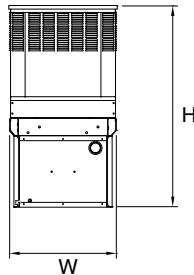
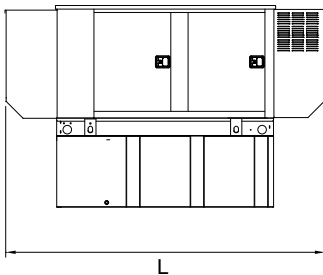
OPEN SET

RUN TIME HOURS	USABLE CAPACITY (GAL)	L	W	H	WT
NO TANK	-	136	58	65	6155
6	183	136	58	78	7103
15	438	136	58	90	7415
23	693	136	58	102	7718
32	946	208	58	105	9362
45	1325	278	58	105	10195



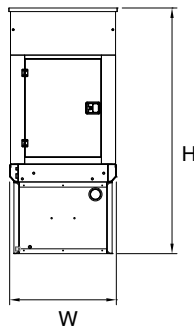
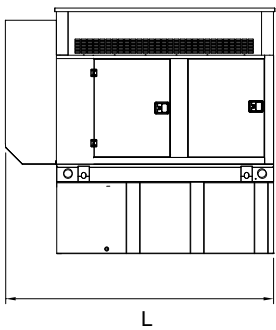
STANDARD ENCLOSURE

RUN TIME HOURS	USABLE CAPACITY (GAL)	L	W	H	WT
NO TANK	-	175	58	78	8173
6	183	175	58	91	9121
15	438	175	58	103	9433
23	693	175	58	115	9736
32	946	208	58	118	11380
45	1325	278	58	118	12213



LEVEL 1 SOUND ENCLOSURE

RUN TIME HOURS	USABLE CAPACITY (GAL)	L	W	H	WT
NO TANK	-	200	58	78	8546
6	183	200	58	91	9494
15	438	200	58	103	9806
23	693	200	58	115	10109
32	946	234	58	118	11753
45	1325	304	58	118	12586



LEVEL 2 SOUND ENCLOSURE

RUN TIME HOURS	USABLE CAPACITY (GAL)	L	W	H	WT
NO TANK	-	181	58	107	8055
6	183	181	58	120	9003
15	438	181	58	132	9315
23	693	181	58	144	9618
32	946	208	58	147	11262
45	1325	278	58	147	12095

*All measurements are approximate and for estimation purposes only. Weights and dBA are available on install drawings and sound data sheets, respectively.

Tank Options

<input type="radio"/> MDEQ	OPT
<input type="radio"/> Florida DERM/DEP	OPT
<input type="radio"/> Chicago Fire Code	OPT
<input type="radio"/> IFC Certification	CALL
<input type="radio"/> 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.