

SD350 | 12.9L | 350 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

GENERAC® | **INDUSTRIAL
POWER**

Standby Power Rating

350 kW, 438 kVA, 60 Hz

Prime Power Rating*

315 kW, 394 kVA, 60 Hz

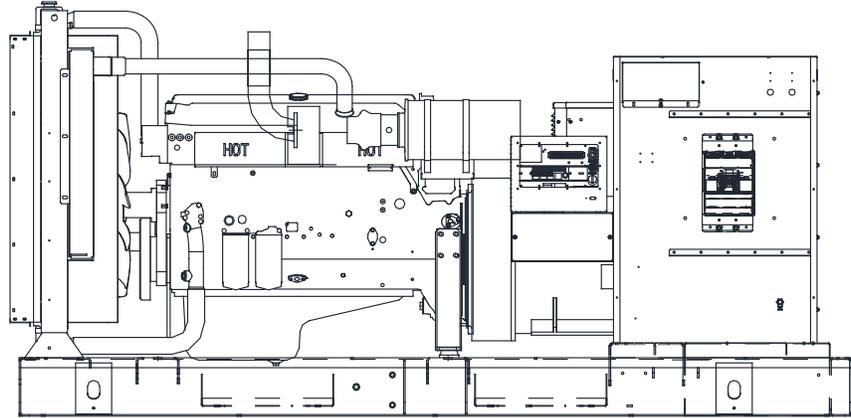


Image used for illustration purposes only



*Built in the USA using domestic and foreign parts

*EPA Certified Prime ratings are not available in the US or its Territories

Codes and Standards

Generac products are designed to the following standards:

 UL2200, UL508, UL142, UL489

 NFPA 37, 70, 99, 110

 NEC 700, 701, 702, 708

 ISO 3046, 7637, 8528, 9001

 NEMA ICS10, MG1, 250, ICS6, AB1

 **ANSI**
American National Standards Institute ANSI C62.41

 **oshp**pd
IBC 2009, CBC 2010, IBC 2012,
ASCE 7-05, ASCE 7-10,
ICC-ES AC-156 (2012)

Powering Ahead

For over 50 years, Generac has provided innovative design and superior manufacturing.

Generac ensures superior quality by designing and manufacturing most of its generator components, including alternators, enclosures and base tanks, control systems and communications software.

Generac gensets utilize a wide variety of options, configurations and arrangements, allowing us to meet the standby power needs of practically every application.

Generac searched globally to ensure the most reliable engines power our generators. We choose only engines that have already been proven in heavy-duty industrial applications under adverse conditions.

Generac is committed to ensuring our customers' service support continues after their generator purchase.

STANDARD OPTIONS

ENGINE SYSTEM

- Oil Drain Extension
- Air Cleaner
- Fan Guard
- Stainless Steel Flexible Exhaust Connection
- Critical Exhaust Silencer (Enclosed Only)
- Factory Filled Oil & Coolant
- Radiator Duct Adapter (Open Set Only)

Fuel System

- Secondary Fuel Filter
- Fuel Lockoff Solenoid

Cooling System

- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Factory-Installed Radiator
- 50/50 Ethylene Glycol Antifreeze
- Radiator Drain Extension
- 240 VAC Coolant Heater

Electrical System

- Battery Charging Alternator
- Battery Cables
- Battery Tray
- Rubber-Booted Engine Electrical Connections
- Solenoid Activated Starter Motor

ALTERNATOR SYSTEM

- GENprotect™
- Class H Insulation Material
- Vented Rotor
- 2/3 Pitch
- Skewed Stator
- Amortisseur Winding
- Permanent Magnet Excitation
- Sealed Bearing
- Full Load Capacity Alternator
- Protective Thermal Switch

GENERATOR SET

- Internal Genset Vibration Isolation
- Separation of Circuits - High/Low Voltage
- Separation of Circuits - Multiple Breakers
- Wrapped Exhaust Piping
- Standard Factory Testing
- 2 Year Limited Warranty (Standby Rated Units)
- 1 Year Warranty (Prime Rated Units)
- Silencer Mounted in the Discharge Hood (Enclosed Only)

ENCLOSURE (if selected)

- Rust-Proof Fasteners with Nylon Washers to Protect Finish
- High Performance Sound-Absorbing Material (Sound Attenuation Enclosures)
- Gasketed Doors
- Stamped Air-Intake Louvers
- Upward Facing Discharge Hoods (Radiator and Exhaust)
- Stainless Steel Lift Off Door Hinges
- Stainless Steel Lockable Handles
- Rhino Coat™ - Textured Polyester Powder Coat Paint

TANK (if selected)

- UL 142
- Double Wall
- Vents
- Sloped Top
- Sloped Bottom
- Factory Pressure Tested (2 psi)
- Rupture Basin Alarm
- Fuel Level
- Check Valve in Supply and Return Lines
- Rhino Coat™ - Textured Polyester Powder Coat Paint
- Stainless Hardware

CONTROL SYSTEM



Digital H Control Panel- Dual 4x20 Display

Program Functions

- Programmable Crank Limiter
- 7-Day Programmable Exerciser
- Special Applications Programmable Logic Controller
- RS-232/485 Communications
- 3 Phase Sensing Digital Voltage Regulator
- 2-Wire Start Capability
- Date/Time Fault History (Event Log)
- Isochronous Governor Control
- Waterproof/Sealed Connectors
- Audible Alarms and Shutdowns

- Not in Auto (Flashing Light)
- Auto/Off/Manual Switch
- E-Stop (Red Mushroom-Type)
- NFPA110 Level I and II (Programmable)
- Customizable Alarms, Warnings, and Events
- Modbus® protocol
- Predictive Maintenance Algorithm
- Sealed Boards
- Password Parameter Adjustment Protection
- Single Point Ground
- 16 Channel Remote Trending
- 0.2msec High Speed Remote Trending
- Alarm Information Automatically Annunciated on the Display

Full System Status Display

- Power Output (kW)
- Power Factor
- kW Hours, Total & Last Run
- Real/Reactive/Apparent Power
- All Phase AC Voltage
- All Phase Currents
- Oil Pressure

- Coolant Temperature
- Coolant Level
- Engine Speed
- Battery Voltage
- Frequency

Alarms and Warnings

- Oil Pressure
- Coolant Temperature
- Coolant Level
- Low Fuel Pressure Alarm
- Engine Overspeed
- Battery Voltage
- Alarms & Warnings Time and Date Stamped
- Snap Shots of Key Operation Parameters During Alarms & Warnings
- Alarms and Warnings Spelled Out (No Alarm Codes)

CONFIGURABLE OPTIONS

ENGINE SYSTEM

- Oil Make-Up System
- Oil Heater
- Air Filter Restriction Indicator

ELECTRICAL SYSTEM

- Battery
- 10A UL Battery Charger
- Battery Warmer

ALTERNATOR SYSTEM

- Alternator Upsizing
- Anti-Condensation Heater
- Tropical Coating

CIRCUIT BREAKER OPTIONS

- Main Line Circuit Breaker
- 2nd Main Line Circuit Breaker
- Shunt Trip and Auxiliary Contact
- Electronic Trip Breakers

GENERATOR SET

- GenLink® Communications Software (English Only)
- 8 Position Load Center
- Alarm Horn
- Extended Factory Testing
- 2 Year Extended Warranty
- 5 Year Warranty
- 5 Year Extended Warranty
- 7 Year Extended Warranty
- 10 Year Extended Warranty

ENCLOSURE

- Standard Enclosure (Weather)
- Level 1 Sound Attenuation
- Level 2 Sound Attenuation
- Steel Enclosure
- Aluminum Enclosure
- IBC Seismic Certification/OSHPD Preapproval
- Up to 200 MPH Wind Load Rating*
- AC/DC Enclosure Lighting Kit

CONTROL SYSTEM

- NFPA 110 Compliant 21-Light Remote Annunciator
- Remote Relay Assembly (8 or 16)
- Oil Temperature Indicator with Alarm
- Ground Fault Indication and Protection Functions
- Engine Run Relay 10A
- Remote E-Stop (Break Glass-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Flush Mount)
- Remote Communication - Modem
- Remote Communication - Ethernet

TANKS (Size On Last Page)

- Electronic Fuel Level
- Mechanical Fuel Level

ENGINEERED OPTIONS

ENGINE SYSTEM

- Fluid Containment Pan
- Coolant Heater Ball Valves

ALTERNATOR SYSTEM

- 3rd Breaker Systems

CONTROL SYSTEM

- Spare Inputs (x4) / Outputs (x4)

GENERATOR SET

- Special Testing
- Battery Box

ENCLOSURE

- Motorized Dampers
- Intrusion Alert Door Switch
- Customer Color

TANKS

- Overfill Protection Valve
- UL 2085 Tank
- ULC S-601 Tank
- Stainless Steel Tank
- Special Fuel Tanks
- Vent Extensions
- 5 Gallon Spill Containment Box
- Dealer Supplied AHJ Requirements

RATING DEFINITIONS

Standby - Applicable for a varying emergency load for the duration of a utility power outage with no overload capability.

Prime - Applicable for supplying power to a varying load in lieu of utility for an unlimited amount of running time. A 10% overload capacity is available for 1 out of every 12 hours. The Prime Power option is only available on International applications. Power ratings in accordance with ISO 8528-1, Second Edition.

* Consult factory for availability

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APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

General

Make	Iveco/FPT
EPA Emissions Compliance	Stationary Emergency
EPA Emissions Reference	See Emissions Data Sheet
Cylinder #	6
Type	In-Line
Displacement - L (cu in)	12.9
Bore - mm (in)	134.6 (5.3)
Stroke - mm (in)	149.9 (5.9)
Compression Ratio	16.5:1
Intake Air Method	Turbocharged/Aftercooled
Cylinder Head Type	4-Valved
Piston Type	Aluminum
Crankshaft Type	Dropped 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)	35 (36.9)

Cooling System

Cooling System Type	Closed
Water Pump Type	Belt Driven Centrifugal
Fan Type	Pusher
Fan Speed (rpm)	2466
Fan Diameter - mm (in)	762 (30.0)

Fuel System

Fuel Type	Ultra Low Sulfur Diesel #2
Carburetor	ASTM
Fuel Filtering (microns)	5
Fuel Inject Pump Make	Electronic
Fuel Pump Type	Engine Driven Gear
Injector Type	Electronic
Engine Type	Pre-Combustion
Fuel Supply Line - mm (in)	12.7 (0.5)
Fuel Return Line - mm (in)	12.7 (0.5)

Engine Electrical System

System Voltage	24 VDC
Battery Charger Alternator	Standard
Battery Size	See Battery Index 0161970SBY
Battery Voltage	(2) 12 VDC
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 Magnet
Bearings	One - Pre Lubed & Sealed
Coupling	Direct, Flexible Disc
Load Capacity- Standby	100%
Prototype Short Circuit Test	Yes
Voltage Regulator Type	Full Digital
Number of Sensed Phases	3
Regulation Accuracy (Steady State)	±0.25%

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OPERATING DATA

POWER RATINGS

		Standby		Prime
Three-Phase 120/208 VAC @0.8pf	350 kW	Amps: 1216	315 kW	Amps: 1094
Three-Phase 120/240 VAC @0.8pf	350 kW	Amps: 1053	315 kW	Amps: 948
Three-Phase 277/480 VAC @0.8pf	350 kW	Amps: 527	315 kW	Amps: 474
Three-Phase 346/600 VAC @0.8pf	350 kW	Amps: 421	315 kW	Amps: 379

STARTING CAPABILITIES (sKVA)

sKVA vs. Voltage Dip

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

FUEL CONSUMPTION RATES*

Fuel Pump Lift - ft (m)				Diesel - gph (lph)			
3 (1)				Percent Load	Standby	Prime	
Total Fuel Pump Flow (Combustion + Return) gph				25%	8.4 (31.8)	7.56 (28.8)	
31				50%	14.5 (54.9)	13.05 (49.6)	
				75%	20.1 (76.1)	18.09 (68.5)	
				100%	25.3 (95.8)	22.77 (86.3)	

* Fuel supply installation must accommodate fuel consumption rates at 100% load.

COOLING

		Standby	Prime
Coolant Flow per Minute	gpm (lpm)	145 (552)	145 (552)
Heat Rejection to Coolant	BTU/hr	932,760	840,590
Inlet Air	cfm (m ³ /min)	19070 (539.7)	19070 (539.7)
Coolant System Capacity	gal (L)	16.6 (63)	16.6 (63)
Maximum Radiator Backpressure	in H ₂ O	0.5	0.5

COMBUSTION AIR REQUIREMENTS

	Standby	Prime
Flow at Rated Power cfm (m ³ /min)	1195 (33.8)	1076 (30.4)

ENGINE

		Standby	Prime
Rated Engine Speed	rpm	1800	1800
Horsepower at Rated kW**	hp	530	477
Piston Speed	ft/min	1770	1770
BMEP	psi	313	218

EXHAUST

		Standby	Prime
Exhaust Flow (Rated Output)	cfm (m ³ /min)	2988 (84.6)	2808 (79.5)
Max. Backpressure (Post Silencer)	in Hg (Kpa)	1.5 (5.1)	1.5 (5.1)
Exhaust Temp (Rated Output - Post Silencer)	°F (°C)	1076 (580)	1076 (580)
Exhaust Outlet Size (Open Set)	mm (in)	88.9 (3.5) NPT (male)	

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

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.

DIMENSIONS AND WEIGHTS*



OPEN SET (Includes Exhaust Flex)

Run Time Hours	Usable Capacity Gal (L)	L x W x H (in (mm))	Weight lbs (kg)
No Tank	-	137.5 (3493) x 57.6 (1463.1) x 67.8 (1722.3)	7330
7	183	137.5 (3493) x 57.6 (1463.1) x 80.8 (2052.3)	8278 (3755)
17	438	137.5 (3493) x 57.6 (1463.1) x 92.8 (2357.3)	8590 (3897)
27	693	137.5 (3493) x 57.6 (1463.1) x 104.81 (2662.3)	8893 (4026)
37	946	208.3 (5291.5) x 57.6 (1463.1) x 122 (3100.3)	10355 (4697)
52	1325	277.76 (7055) x 57.6 (1463.1) x 121 (3072.3)	11370 (5158)

STANDARD ENCLOSURE

Run Time Hours	Usable Capacity Gal (L)	L x W x H (in (mm))	Weight lbs (kg) Enclosure Only	
			Steel	Aluminum
No Tank	-	174.7 (4437) x 57.7 (1460) x 77.8 (1977)		
7	183	174.7 (4437) x 57.7 (1460) x 90.83 (2307)		
17	438	174.7 (4437) x 57.7 (1460) x 102.83 (2612)	1295 (588)	501 (227)
27	693	174.7 (4437) x 57.7 (1460) x 114.84 (2917)		
37	946	208 (5283) x 57.7 (1460) x 132 (3355)		
52	1325	278 (7061) x 57.7 (1460) x 130.98 (3327)		

LEVEL 1 ACOUSTIC ENCLOSURE

Run Time Hours	Usable Capacity Gal (L)	L x W x H (in (mm))	Weight lbs (kg) Enclosure Only	
			Steel	Aluminum
No Tank	-	200 (5084) x 57.7 (1460) x 78 (1981)		
7	183	200 (5084) x 57.7 (1460) x 91 (2311)		
17	438	200 (5084) x 57.7 (1460) x 103 (2616)	1470 (667)	935 (425)
27	693	200 (5084) x 57.7 (1460) x 115 (2921)		
37	946	208.32 (5291.5) x 57.7 (1460) x 118 (2997)		
52	1325	277.76 (7055) x 57.7 (1460) x 118 (2997)		

LEVEL 2 ACOUSTIC ENCLOSURE

Run Time Hours	Usable Capacity Gal (L)	L x W x H (in (mm))	Weight lbs (kg) Enclosure Only	
			Steel	Aluminum
No Tank	-	180.6 (4588) x 57.7 (1460) x 107.2 (2724)		
7	183	180.6 (4588) x 57.7 (1460) x 120 (3048)		
17	438	180.6 (4588) x 57.7 (1460) x 132 (3353)	2515 (1141)	1131 (514)
27	693	180.6 (4588) x 57.7 (1460) x 144 (3658)		
37	946	290 (7366) x 57.7 (1460) x 116 (2946)		
52	1325	278 (7061) x 57.7 (1460) x 147 (3734)		

* All measurements are approximate and for estimation purposes only.

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.