

# SD350 & MD350 | 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



\*Assembled in the USA using domestic and foreign parts

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

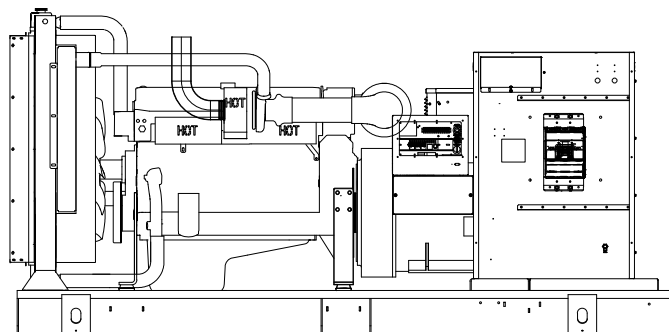


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## Codes and Standards

**Not all codes and standards apply to all configurations. Contact factory for details.**



UL2200, UL6200, UL1236, UL489,  
UL142



CSA C22.2, ULC S601



BS5514 and DIN 6271



SAE J1349



NFPA 37, 70, 99, 110



NEC700, 701, 702, 708



NEMA ICS10, MG1, 250, ICS6,  
AB1



ANSI C62.41



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

## Powering Ahead

For over 60 years, Generac has provided innovative design and superior manufacturing.

Generac provides 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 for the most reliable engines to 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 FEATURES

## ENGINE SYSTEM

- Oil Drain Extension
- Air Cleaner
- Level 1 Fan and Belt Guards (Open Set Only)
- Stainless Steel Flexible Exhaust Connection
- Critical Silencer (Enclosed Units Only)
- Factory Filled Oil and Coolant
- Radiator Duct Adapter (Open Set Only)
- Engine Coolant Heater

## 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

## ELECTRICAL SYSTEM

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

## ALTERNATOR SYSTEM

- UL2200 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 Extended Limited Warranty (Standby Rated Units)
- Silencer Mounted in the Discharge Hood (Enclosed Units Only)

## ENCLOSURE (IF SELECTED)

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

## FUEL TANKS (IF SELECTED)

- UL 142/ULC S601
- Double Wall
- Vents
- Sloped Top
- Sloped Bottom
- Factory Pressure Tested - 2 psi
- Rupture Basin Alarm
- Fuel Level
- Check Valve In Supply and Return Lines
- RhinoCoat™ - Textured Polyester Powder Coat Paint
- Stainless Steel Hardware

## CONTROL SYSTEM — SD-ONLY



## 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
- All 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
- 0.2 msec High Speed Remote Trending
- Alarm Information Automatically Annunciated on the Display

## Full System Status Display

- Power Output (kW)
- Power Factor
- kW Hours, Total, and 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
- Engine Overspeed
- Battery Voltage
- Alarms and Warnings Time and Date Stamped
- Snap Shots of Key Operation Parameters During
- Alarms and Warnings
- Alarms and Warnings Spelled Out (No Alarm Codes)

**CONTROL SYSTEM — MD-ONLY****Digital G Paralleling Control Panel - Touchscreen****Program Functions**

- Programmable Crank Limiter
- 7-Day Programmable Exerciser
- Special Applications Programmable Logic Controller
- RS-232/485 Communications
- All Phase Sensing Digital Voltage Regulator

**PARALLELING CONTROLS**

- Auto-Synchronization Process
- Isochronous Load Sharing
- Reverse Power Protection

- 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
- 0.2 msec High Speed Remote Trending
- Alarm Information Automatically Annunciated on the Display

**Full System Status Display**

- Power Output (kW)
- Power Factor

- Maximum Power Protection
- Electrically Operated, Mechanically Held Paralleling Switch
- Sync Check System

- kW Hours, Total and 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
- Engine Overspeed
- Battery Voltage
- Alarms and Warnings Time and Date Stamped
- Snap Shots of Key Operation Parameters During Alarms and Warnings
- Alarms and Warnings Spelled Out (No Alarm Codes)

- Optional Programmable Logic Full Auto Back-Up Controls (PLS)
- Independent On Board Paralleling
- Shunt Trip and Auxiliary Contact

**CONFIGURABLE OPTIONS****ENGINE SYSTEM**

- Level 1 Fan and Belt Guards (Enclosed Units Only)
- Radiator Stone Guard (Open Set Only)
- Shipped Loose Critical Silencer Flange (Open Set Only)
- Heavy Duty Air Cleaner
- Oil Heater
- Air Filter Restriction Indicator
- Critical Silencer Flange - Shipped Loose (Open Set Only)
- Radiator Stone Guard (Open Set Only)

**ELECTRICAL SYSTEM**

- 10A UL Listed Battery Charger
- Battery Warmer

**ALTERNATOR SYSTEM**

- Alternator Upsizing
- Anti-Condensation Heater
- Tropical Coating

**CIRCUIT BREAKER OPTIONS**

- Main Line Circuit Breaker
- SD-Only: 2<sup>nd</sup> Main Line Circuit Breaker
- SD-Only: Shunt Trip and Auxiliary Contact
- Electronic Trip Breakers

**GENERATOR SET**

- 12 Position Load Center
- Extended Factory Testing

**ENCLOSURE**

- Weather Protected Enclosure
- Level 1 Sound Attenuated
- Level 2 Sound Attenuated
- Level 2 Sound Attenuated with Motorized Dampers
- Steel Enclosure
- Aluminum Enclosure
- IBC Seismic Certification
- Up to 200 MPH Wind Load Rating (Contact Factory for Availability)
- AC/DC Enclosure Lighting Kit
- Enclosure Heater (with Motorized Dampers Only)

**FUEL TANKS (SIZES ON LAST PAGE)**

- Emergency Venting
- 8 in (203.2 mm) Fill Extension
- 13 in (330.2 mm) Fill Extension
- 19 in (482.6 mm) Fill Extension

**CONTROL SYSTEM**

- NFPA 110 Compliant 21-Light Remote Annunciator
- Remote Relay Assembly (8 or 16)
- Ground Fault Annunciator
- 10A Engine Run Relay
- 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
- 100 dB Alarm Horn
- 120 V GFCI and 240 Outlet
- Damper Alarm Contacts (with Motorized Dampers Only)

**WARRANTY**

- 2 Year Extended Limited Warranty
- 5 Year Extended Limited Warranty
- 7 Year Extended Limited Warranty
- 10 Year Extended Limited Warranty

**ENGINEERED OPTIONS****ENGINE SYSTEM**

- Fluid Containment Pan
- Coolant Heater Ball Valves

**CONTROL SYSTEM**

- SD-Only: Spare Inputs (x4)/Outputs (x4)
- MD-Only: Battery Disconnect Switch

**ALTERNATOR SYSTEM**

- SD-Only: 3<sup>rd</sup> Breaker System
- MD-Only: 2<sup>nd</sup> Breaker System

**GENERATOR SET**

- Special Testing
- SD-Only: Battery Box

**ENCLOSURE**

- Door Open Alarm Switch

**FUEL TANKS**

- Overfill Protection Valve
- UL 2085 Tank
- Special Fuel Tanks
- Vent Extensions
- SD-Only: Stainless Steel Tank
- SD-Only: 5 Gallon Spill Containment Box
- SD-Only: Dealer Supplied AHJ Requirements

## APPLICATION AND ENGINEERING DATA

## ENGINE SPECIFICATIONS

## General

Make	Iveco/FPT
EPA Emissions Compliance	Stationary Emergency
EPA Emissions Reference	See Emission Data Sheet
Cylinder #	6
Type	In-line
Displacement - in <sup>3</sup> (L)	787.2 (12.9)
Bore - in (mm)	5.3 (134.6)
Stroke - in (mm)	5.9 (149.9)
Compression Ratio	16.5:1
Intake Air Method	Turbocharged/Aftercooled
Cylinder Head	4-Valve
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 Oil Capacity - qt (L)	36.9 (35)

## Cooling System

Cooling System Type	SD: Closed Recovery MD: Closed
Fan Type	Pusher
Fan Speed - RPM	2,466
Fan Diameter - in (mm)	30 (762)

## Fuel System

Fuel Type	Ultra Low Sulfur Diesel Fuel #2
Fuel Specifications	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 - in (mm)	0.5 (12.7) NPT
Fuel Return Line - in (mm)	0.5 (12.7) NPT

## 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	K0400124Y21
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 - Pre-Lubed and Sealed
Coupling	Direct via Flexible Disc
Load Capacity- Standby	100%
Prototype Short Circuit Test	Yes
Voltage Regulator Type	Digital
Number of Sensed Phases	All
Regulation Accuracy (Steady State)	±0.25%

## OPERATING DATA

## POWER RATINGS

	Standby	
SD-Only: Three-Phase 120/208 VAC @0.8pf	350 kW	Amps: 1,214
SD-Only: Three-Phase 120/240 VAC @0.8pf	350 kW	Amps: 1,053
Three-Phase 277/480 VAC @0.8pf	350 kW	Amps: 526
Three-Phase 346/600 VAC @0.8pf	350 kW	Amps: 421

## MOTOR STARTING CAPABILITIES (SKVA)

skVA vs. Voltage Dip			
277/480 VAC 3Ø	30%	208/240 VAC 3Ø	30%
K0400124Y21	953	SD-Only: K0400124Y23	810
K0400124Y23	1,060	SD-Only: K0500124Y23	730
K0500124Y23	1,020	SD-Only: K0600124Y23	1,120

## FUEL CONSUMPTION RATES\*

Fuel Pump Lift - ft (m)	Diesel - gph (Lph)	
3 (1)	Percent Load	Standby
	25%	8.4 (31.8)
	50%	14.5 (54.9)
	75%	20.1 (76.1)
	100%	25.3 (95.8)

Total Fuel Pump Flow (Combustion + Return) - gph (Lph)  
31 (117)

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

## COOLING

	Standby	
Coolant Flow	gpm (Lpm)	145 (552)
Coolant System Capacity	gal (L)	13.0 (49.2)
Heat Rejection to Coolant	BTU/hr (kW)	792,960 (232)
Inlet Air	cfm (m <sup>3</sup> /hr)	19,070 (539.7)
Maximum Operating Radiator Air Temperature	°F (°C)	122 (50)
Maximum Operating Ambient Temperature (Before Derate)	See Bulletin No. 0199280SSD	
Maximum Additional Radiator Backpressure	in H <sub>2</sub> O (kPa)	0.5 (0.12)

## COMBUSTION AIR REQUIREMENTS

	Standby
Flow at Rated Power - cfm (m <sup>3</sup> /min)	1,195 (33.8)

## ENGINE

	Standby	
Rated Engine Speed	RPM	1,800
Horsepower at Rated kW**	hp	530
Piston Speed	ft/min (m/min)	1,770 (540)
BMEP	psi (kPa)	313 (2,158)

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

## EXHAUST

	Standby	
Exhaust Flow (Rated Output)	cfm (m <sup>3</sup> /min)	2,988 (84.6)
Maximum Allowable Exhaust Backpressure (Post Silencer)	inHg (kPa)	1.5 (5.1)
Exhaust Temperature (Rated Output - Post Turbo)	°F (°C)	1,076 (580)

Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions.

Please contact a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with BS5514 and DIN6271 standards.

SD-Only: Standby - See Bulletin 10000018933 MD-Only: Standby - See Bulletin 0187500SSB

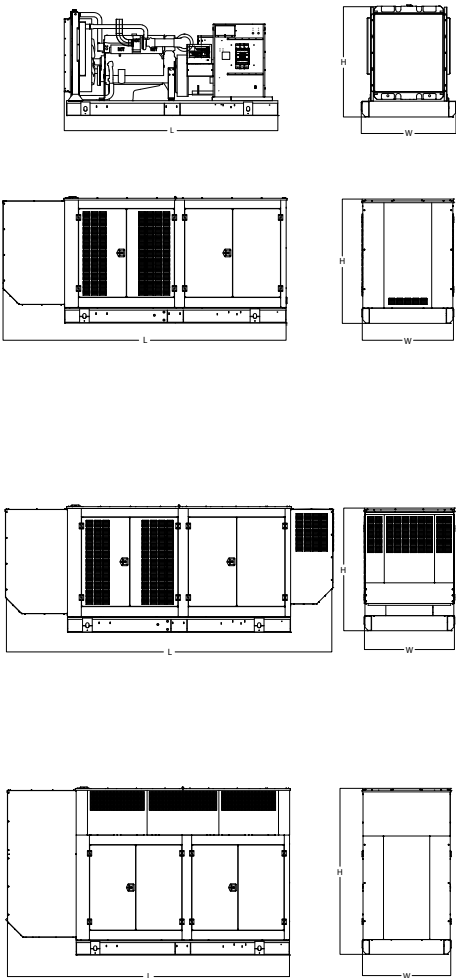
SD-Only: Prime - See Bulletin 10000018926 MD-Only: Prime - See Bulletin 0187510SSB

SD350 & MD350 | 12.9L | 350 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

DIMENSIONS AND WEIGHTS\*



OPEN SET

Run Time - Hours	Usable Capacity - gal (L)	L x W x H - in (mm)	Weight - lbs (kg)
No Tank	-	137.5 (3,493) x 57.6 (1,463) x 67.8 (1,722)	5,377 - 7,330 (2,439 - 3,325)
7	183 (693)	137.5 (3,493) x 57.6 (1,463) x 80.8 (2,052)	6,325 - 8,278 (2,869 - 3,755)
17	438 (1,659)	137.5 (3,493) x 57.6 (1,463) x 92.8 (2,357)	6,637 - 8,590 (3,011 - 3,897)
27	693 (2,624)	137.5 (3,493) x 57.6 (1,463) x 104.8 (2,662)	6,973 - 8,926 (3,163 - 4,049)
37	946 (3,581)	208.3 (5,292) x 57.6 (1,463) x 108.8 (2,762)	8,402 - 10,335 (3,811 - 4,697)
52	1,325 (5,016)	277.8 (7,055) x 57.6 (1,463) x 107.2 (2,722)	9,417 - 11,370 (4,272 - 5,158)

WEATHER PROTECTED 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 (4,437) x 57.7 (1,460) x 77.8 (1,977)	1,532 (695)	732 (334)
7	183 (693)	174.7 (4,437) x 57.7 (1,460) x 90.8 (2,307)		
17	438 (1,659)	174.7 (4,437) x 57.7 (1,460) x 102.8 (2,612)		
27	693 (2,624)	174.7 (4,437) x 57.7 (1,460) x 114.8 (2,917)		
37	946 (3,581)	208.0 (5,283) x 57.7 (1,460) x 132.0 (3,355)		
52	1,325 (5,016)	278.0 (7,061) x 57.7 (1,460) x 131.0 (3,327)		

LEVEL 1 SOUND ATTENUATED ENCLOSURE

Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg) Enclosure Only	
			Steel	Aluminum
No Tank	-	200.2 (5,084) x 57.5 (1,460) x 90.8 (2,306)	1,995 (905)	935 (425)
7	183 (693)	200.2 (5,084) x 57.5 (1,460) x 90.8 (2,306)		
17	438 (1,659)	200.2 (5,084) x 57.5 (1,460) x 102.8 (2,611)		
27	693 (2,624)	200.2 (5,084) x 57.5 (1,460) x 114.8 (2,916)		
37	946 (3,581)	208.3 (5,292) x 57.5 (1,460) x 118.8 (3,016)		
52	1,325 (5,016)	277.8 (7,055) x 57.5 (1,460) x 117.2 (2,976)		

LEVEL 2 SOUND ATTENUATED 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 (4,588) x 57.5 (1,460) x 107.3 (2,725)	1,995 (905)	1,184 (537)
7	183 (693)	180.6 (4,588) x 57.5 (1,460) x 120.3 (3,055)		
17	438 (1,659)	180.6 (4,588) x 57.5 (1,460) x 132.3 (3,360)		
27	693 (2,624)	180.6 (4,588) x 57.5 (1,460) x 144.3 (3,665)		
37	946 (3,581)	208.3 (5,292) x 57.5 (1,460) x 148.3 (3,765)		
52	1,325 (5,016)	277.8 (7,055) x 57.5 (1,460) x 146.7 (3,725)		

\* All measurements are approximate and for estimation purposes only. Specification characteristics may change without notice. Please contact a Generac Power Systems Industrial Dealer for detailed installation drawings. Extended and not extended tank offerings vary. Contact dealer for options.

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YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER