

SD275 | 10.3L | 275 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

GENERAC | INDUSTRIAL
POWER

Standby Power Rating

275 kW, 344 kVA, 60 Hz

Prime Power Rating*

248 kW, 309 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.

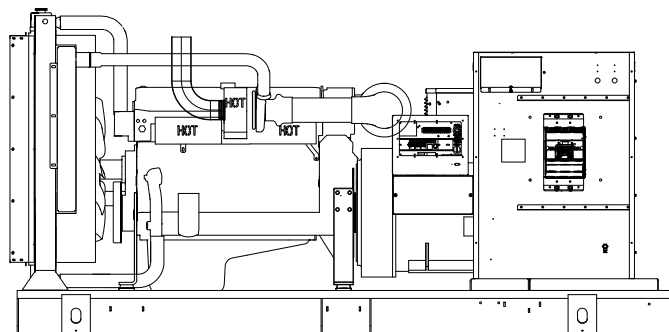


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Codes and Standards

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
- Level 1 Fan and Belt Guards (Open Set Only)
- Stainless Steel Flexible Exhaust Connection
- Factory Filled Oil and Coolant
- Radiator Duct Adapter (Open Set Only)

FUEL SYSTEM

- Fuel Lockoff Solenoid
- Primary Fuel Filter

COOLING SYSTEM

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

ELECTRICAL SYSTEM

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

ALTERNATOR SYSTEM

- UL2200 GENprotect™
- 12 Leads (3-Phase, Non 600V)
- Class H Insulation Material
- Vented Rotor
- 2/3 Pitch
- Skewed Stator
- Auxiliary Voltage Regulator Power Winding
- Permanent Magnet Excitation
- Sealed Bearings
- Automated Manufacturing (Winding, Insertion, Lacing, Varnishing)
- Rotor Dynamically Spin Balanced
- Amortisseur Winding
- 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)
- 1 Year Extended Limited Warranty (Prime 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



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

- 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)

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

CONFIGURABLE OPTIONS**ENGINE SYSTEM**

- Block Heater
- Oil Heater
- Level 1 Fan and Belt Guards (Enclosed Units Only)
- Heavy Duty Air Cleaner
- Radiator Stone Guard
- Air Filter Restriction Indicator

FUEL SYSTEM

- NPT Flexible Fuel Line

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

GENERATOR SET

- Extended Factory Testing
- IBC Seismic Certification
- 12 Position Load Center
- Spring Vibration Isolators

ENCLOSURE

- Weather Protected Enclosure
- Level 1 Sound Attenuated
- Level 2 Sound Attenuated
- Level 2 Sound Attenuated with Motorized Dampers
- Steel Enclosure
- Aluminum Enclosure
- Door Open Alarm Horn
- 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)

- 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)
- Oil Temperature Sender with Indication Alarm
- Remote E-Stop (Break Glass-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Flush Mount)
- 100 dB Alarm Horn
- Ground Fault Annunciator
- 120 V GFCI and 240 Outlet
- Flush Mount Annunciator Kit
- Remote Communication - Modem
- 10A Engine Run Relay
- Damper Alarm Contacts (with Motorized Dampers Only)

WARRANTY (STANDBY GENSETS ONLY)

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

ENGINEERED OPTIONS**ENGINE SYSTEM**

- Coolant Heater Ball Valves
- Fluid Containment Pan

CONTROL SYSTEM

- Spare Inputs (x4)/Outputs (x4)
- Battery Disconnect Switch

ALTERNATOR SYSTEM

- 3rd Breaker System

GENERATOR SET

- Special Testing

FUEL TANKS

- Overfill Protection Valve
- UL2085 Tank
- Special Fuel Tanks
- Vent Extensions

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 ³ (L)	628.54 (10.3)
Bore - in (mm)	4.92 (125)
Stroke - in (mm)	5.51 (140)
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)	31.68 (30)

Cooling System

Cooling System Type	Closed Recovery
Water Pump Type	Pre-Lubed, Self Sealing
Fan Type	Pusher
Fan Speed - RPM	2,250
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	Common Rail
Engine Type	Direct Injection
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	K0275124Y21
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 via Flexible Disc
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		
Three-Phase 120/208 VAC @0.8pf	275 kW	Amps: 954
Three-Phase 120/240 VAC @0.8pf	275 kW	Amps: 827
Three-Phase 277/480 VAC @0.8pf	275 kW	Amps: 414
Three-Phase 346/600 VAC @0.8pf	275 kW	Amps: 331

MOTOR STARTING CAPABILITIES (SKVA)

skVA vs. Voltage Dip			
277/480 VAC 3Ø	30%	208/240 VAC 3Ø	30%
K0275124Y21	790	K0275124Y21	609
K0350124Y21	1,001	K0350124Y21	801
K0400124Y21	953	K0400124Y21	717

FUEL CONSUMPTION RATES*

Fuel Pump Lift - ft (m)	Diesel - gph (Lph)	
3 (1)	Percent Load	Standby
	25%	6.8 (25.7)
	50%	11.7 (44.2)
	75%	15.8 (59.8)
	100%	19.6 (74.2)

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)	95 (360)
Coolant System Capacity	gal (L)	13.0 (49.2)
Heat Rejection to Coolant	BTU/hr (kW)	722,612 (211.8)
Inlet Air	cfm (m³/hr)	14,505 (411)
Maximum Operating Ambient Temperature	°F (°C)	110 (43.3)
Maximum Operating Ambient Temperature (Before Derate)	See Bulletin No. 0199280SSD	
Maximum Additional Radiator Backpressure	in H ₂ O (kPa)	0.5 (0.12)

COMBUSTION AIR REQUIREMENTS

Standby
Flow at Rated Power - scfm (m³/min)
780 (22.1)

ENGINE

Standby		
Rated Engine Speed	RPM	1,800
Horsepower at Rated kW**	hp	449
Piston Speed	ft/min (m/min)	1,654 (504)
BMEP	psi (kPa)	308 (2,124)

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

EXHAUST

Standby		
Exhaust Flow (Rated Output)	cfm (m³/min)	2,050 (58.1)
Maximum Allowable Backpressure (Post Silencer)	inHg (kPa)	1.5 (5.1)
Exhaust Temperature (Rated Output)	°F (°C)	950 (510)

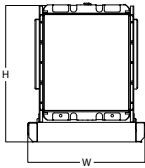
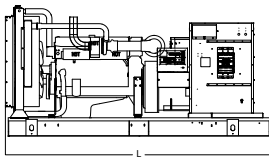
Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions.

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

Standby - See Bulletin 10000018933

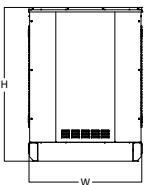
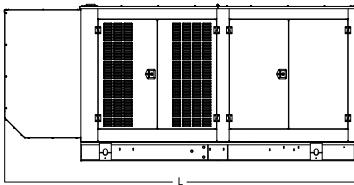
Prime - See Bulletin 10000018926

DIMENSIONS AND WEIGHTS*



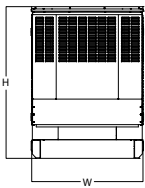
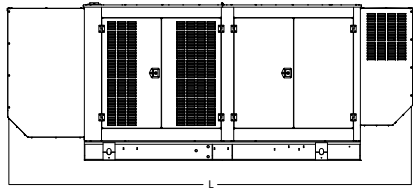
OPEN SET

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)	6,121 - 7,457 (2,776 - 3,382)	
9	183 (693)	137.5 (3,493) x 57.6 (1,463) x 67.8 (1,722)	7,069 - 8,405 (3,206 - 3,812)	
22	438 (1,659)	137.5 (3,493) x 57.6 (1,463) x 67.8 (1,722)	7,381 - 8,717 (3,348 - 3,954)	
35	693 (2,624)	137.5 (3,493) x 57.6 (1,463) x 67.8 (1,722)	7,717 - 9,053 (3,500 - 4,106)	
48	946 (3,581)	208.3 (5,220) x 57.6 (1,463) x 122.0 (3,100)	9,146 - 10,482 (4,148 - 4,754)	
67	1,325 (5,015)	277.8 (7,055) x 57.6 (1,463) x 120.9 (3,072)	10,161 - 11,497 (4,659 - 5,265)	



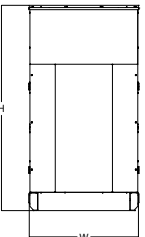
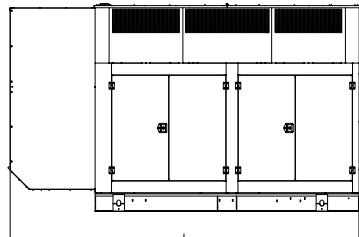
WEATHER PROTECTED ENCLOSURE

Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg) Enclosure Only	
No Tank	-	174.7 (4,437) x 53.0 (1,346) x 77.8 (1,977)	Steel	Aluminum
9	183 (693)	174.7 (4,437) x 53.0 (1,346) x 77.8 (1,977)	1,521 (690)	727 (330)
22	438 (1,659)	174.7 (4,437) x 53.0 (1,346) x 77.8 (1,977)		
35	693 (2,624)	174.7 (4,437) x 53.0 (1,346) x 77.8 (1,977)		
48	946 (3,581)	208.3 (5,220) x 53.0 (1,346) x 132.0 (3,355)		
67	1,325 (5,015)	277.8 (7,055) x 53.0 (1,346) x 130.9 (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	
No Tank	-	200.2 (5,084) x 57.5 (1,460) x 90.8 (2,306)	Steel	Aluminum
9	183 (693)	200.2 (5,084) x 57.5 (1,460) x 90.8 (2,306)	1,984 (900)	926 (421)
22	438 (1,659)	200.2 (5,084) x 57.5 (1,460) x 90.8 (2,306)		
35	693 (2,624)	200.2 (5,084) x 57.5 (1,460) x 90.8 (2,306)		
48	946 (3,581)	200.2 (5,084) x 57.5 (1,460) x 90.8 (2,306)		
67	1,325 (5,015)	277.8 (7,055) x 57.5 (1,460) x 130.9 (3,326)		



LEVEL 2 SOUND ATTENUATED ENCLOSURE

Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg) Enclosure Only	
No Tank	-	180.7 (4,588) x 57.5 (1,460) x 107.3 (2,725)	Steel	Aluminum
9	183 (693)	180.7 (4,588) x 57.5 (1,460) x 107.3 (2,725)	2,557 (1,160)	1,173 (531)
22	438 (1,659)	180.7 (4,588) x 57.5 (1,460) x 107.3 (2,725)		
35	693 (2,624)	180.7 (4,588) x 57.5 (1,460) x 107.3 (2,725)		
48	946 (3,581)	180.7 (4,588) x 57.5 (1,460) x 107.3 (2,725)		
67	1,325 (5,015)	277.8 (7,055) x 57.5 (1,460) x 160.4 (4,075)		

* 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.