SD275 & MD275 | 10.3 L | 275 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

GENERAC INDUSTRIAL ENERGY

Standby Power Rating

275 kW, 344 kVA, 60 Hz

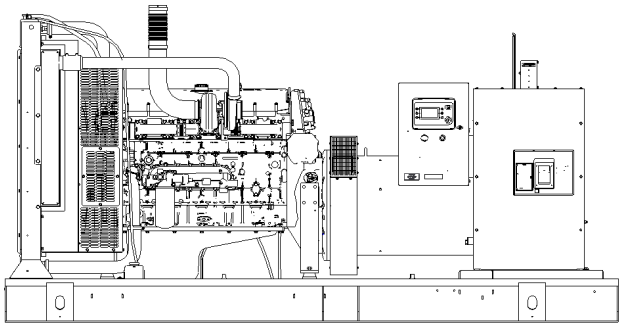

Image used for illustration purposes only

USA ENGINEERED & BUILT*

*Assembled in the USA using domestic and foreign parts

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

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 2021, IBC 2024, IBC 2027, CBC 2022, CBC 2025, CBC 2028, ASCE 7-16, ASCE 7-22

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.

SD275 & MD275 | 10.3 L | 275 kW

INDUSTRIAL DIESEL GENERATOR SET

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GENERAC® INDUSTRIAL ENERGY

STANDARD FEATURES

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

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

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

ALTERNATOR SYSTEM
- 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
- Generac Link Connectivity Hardware
- 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)

ENCLOSURE (IF SELECTED)
- Silencer Mounted in the Discharge Hood
- 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

SD275 & MD275 | 10.3 L | 275 kW

INDUSTRIAL DIESEL GENERATOR SET

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GENERAC INDUSTRIAL ENERGY

CONTROL SYSTEM

DSE G8601 Controller

Key Features

- Advanced PLC Functionality
- Multi-Purpose PIDs
- Virtual Inputs
- On-Screen Mimic (SLDs)
- Multiple Application Support
- Multi-Level Pin Protected Front Panel Editor
- Integral LCD Display Heater
- Enhanced High-Resolution 240 x 128 Pixel Display
- Single Generator Control
- Latest ECU/ECM Support
- Touch Screen Panel PC Support
- Zero Sequence Voltage Protection
- Integral Gasket (IP65 protection

Standard Protections

- Low Coolant Level
- High/Low Coolant Temperature
- Oil Temperature
- Over/Under Speed
- Over/Under Voltage
- Over/Under Frequency
- Over/Under Current
- Over Load
- Battery Voltage
- Battery Charger Current
- Phase to Phase and Phase to Neutral Short Circuits (I^2T Algorithm)
- Ground Fault

Control Panel

- Auto/Off/Manual
- Indication Through Display Screen
- Audible Alarm and Silence
- Not in Auto Indication

Voltage Regulation

- Digital Control
- Three-Phase Sensing
- Negative Power Limit
- Loss of Sensing Protection
- Fault Protection (I^2T Function)
- High Voltage Limit
- Low Voltage Limit
- Maximum Power Limit
- ±0.5% Voltage Regulation

Governor Functionality

- Speed Control through ECM Integration
- Soft Start Ramping (Multiple Steps)

Qualification Testing

- Life Test in Environmental Chamber
- Temperature Rating -22 °F to +122 °F (-30 °C to +50 °C)
- Vibration Tested and Protected

Connections (Actual I/O May Vary Due to Configuration)

- 4 Analog Inputs
- 12 Digital Inputs
  - 9 Active Low Digital Outputs

Customer Ports

- Ethernet
- 2 RS-485
- 2 USB
- CANBus

Codes and Standards

- UL/ULC 6200
- CE
- NFPA 110 Capable

More Features

- Built-in Governor
- Digital AVR Support
- Multiple Language Support
- Three-Phase Generator Sensing and Protection
- Three-Phase Bus Sensing
- Generator Current, Protection and Power Monitoring
- Configurable Timers
- Integrated SNMP
- Data Logging
- PC Configuration
- DSENet® (Expansion Support)
- Flexible I/O (Inputs/Outputs)
- Automatic and Front Panel Breaker Control
- Power-Save Mode

PARALLELING CONTROLS

- Auto-Synchronization Process
- Isochronous Load Sharing
- Reverse Power Protection
- Maximum Power Protection
- Electrically Operated, Mechanically Held Paralleling Switch
- Sync Check System
- Optional Programmable Logic Full Auto Back-Up Controls (PLS)
- Independent On Board Paralleling
- Shunt Trip and Auxiliary Contact

SD275 & MD275 | 10.3 L | 275 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

GENERAC INDUSTRIAL ENERGY

CONFIGURABLE OPTIONS

ENGINE SYSTEM
- Forced Flow Block Heater
- Heavy Duty Air Cleaner
- Air Filter Restriction Indicator
- Oil Heater
- Exhaust Silencer - Shipped Loose (Open Set Only

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
- HCAI/OSHPD Seismic Certification
- 12 Position Load Center
- Spring Vibration Isolators
- Radiator Stone Guard (Open Set Only)
- Critical Silencer Flange - Shipped Loose (Open Set Only)

ENCLOSURE
- Weather Protected Enclosure
- Level 1 Sound Attenuated
- Level 2 Sound Attenuated
- Level 2 Sound Attenuated with Motorized Dampers
- Steel Enclosure
- Aluminum Enclosure
- Up to 200 MPH Wind Load Rating (Contact Factory for Availability)
- AC/DC Enclosure Lighting Kit
- Door Alarm Switch
- 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)
- Remote E-Stop (Break Glass-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Flush Mount)
- 10A Engine Run Relay
- Ground Fault Annunciator
- 100 dB Alarm Horn
- 120 V GFCI Outlet
- Flush Mount Annunciator Kit
- Remote Communication - Modem
- 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

SD275 & MD275 | 10.3 L | 275 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

GENERAC INDUSTRIAL ENERGY

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)	24.8 (23.5)

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%

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GENERAC INDUSTRIAL ENERGY

OPERATING DATA

POWER RATINGS

	Standby	
Three-Phase 120/208 VAC @0.8pf	344 kVA/275 kW	Amps: 954
Three-Phase 120/240 VAC @0.8pf	344 kVA/275 kW	Amps: 827
Three-Phase 277/480 VAC @0.8pf	344 kVA/275 kW	Amps: 413
Three-Phase 346/600 VAC @0.8pf	344 kVA/275 kW	Amps: 331

MOTOR STARTING CAPABILITIES (SKVA)

	skVA vs. Voltage Dip				
277/480 VAC 3Ø	30%	208/240 VAC 3Ø	30%	346/600 VAC 3Ø	30%
K0275124Y21	790	K0275124Y21	609	L0300064N21	721
K0350124Y21	1,001	K0350124Y21	801	L0350064N21	826
K0400124Y21	953	K0400124Y21	717	L0400064N21	866
		K0500124Y23	650		

FUEL CONSUMPTION RATES*

Fuel Pump Lift - ft (m)
3 (1)

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

Diesel - gph (Lph)	
Percent Load	Standby
25%	7.2 (27.4)
50%	11.6 (43.9)
75%	16.0 (60.5)
100%	20.4 (77.2)

*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 (49)
Heat Rejection to Coolant	BTU/hr (kW)	722,612 (211.8)
Inlet Air	cfm (m^3/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 H2O (kPa)	0.5 (0.12)

COMBUSTION AIR REQUIREMENTS

	Standby
Flow at Rated Power - scfm (m^3/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 (m^3/min)	2,050 (58.0)
Maximum Allowable Backpressure (Post Silencer)	inHg (kPa)	1.5 (5.1)
Exhaust Temperature (Rated Output)	°F (°C)	950 (510)

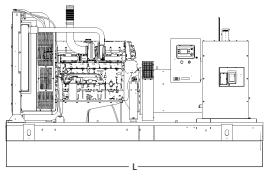
Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions.
Please contact a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with BS5514 and DIN6271 standards.
Standby - See Bulletin 10000018933
Prime - See Bulletin 10000018926

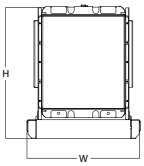
SD275 & MD275 | 10.3 L | 275 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

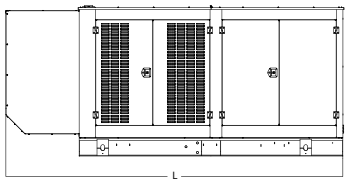
DIMENSIONS AND WEIGHTS*

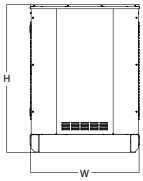




OPEN SET

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 (1,357) x 67.8 (1,722)	7,457 (3,382)
9.0	183 (693)	137.5 (3,493) x 57.6 (1,357) x 80.8 (2,052)	8,405 (3,812)
21.5	438 (1,658)	137.5 (3,493) x 57.6 (1,357) x 92.8 (2,357)	8,717 (3,954)
34.0	693 (2,623)	137.5 (3,493) x 57.6 (1,357) x 104.8 (2,662)	9,053 (4,106)
46.4	946 (3,581)	208.3 (5,291) x 57.6 (1,357) x 108.8 (2,764)	10,482 (4,754)
65.0	1,325 (5,015)	277.8 (7,056) x 57.6 (1,357) x 107.2 (2,723)	11,497 (5,265)





LEVEL 0 SOUND ATTENUATED ENCLOSURE

Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg)**	
			Steel	Aluminum
No Tank	-	174.7 (4,437) x 53.0 (1,346) x 77.8 (1,976)	8979 (4073)	8184 (3712)
9.0	183 (693)	174.7 (4,437) x 53.0 (1,346) x 90.8 (2,306)	9927 (4503)	9132 (4142)
21.5	438 (1,658)	174.7 (4,437) x 53.0 (1,346) x 102.8 (2,611)	10239 (4644)	9444 (4284)
34.0	693 (2,623)	174.7 (4,437) x 53.0 (1,346) x 114.8 (2,916)	10575 (4797)	9780 (4436)
46.4	946 (3,581)	208.3 (5,291) x 53.0 (1,346) x 118.8 (3,018)	12004 (5445)	11209 (5084)
65.0	1,325 (5,015)	277.8 (7,056) x 53.0 (1,346) x 117.2 (2,977)	13019 (5905)	12224 (5545)

* 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.

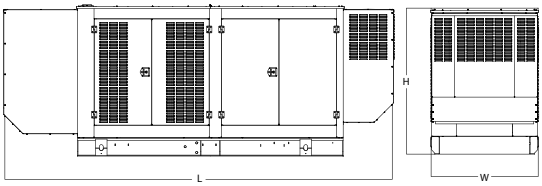
** Weights shown represent maximum configurations with heaviest available options installed.

SD275 & MD275 | 10.3 L | 275 kW

INDUSTRIAL DIESEL GENERATOR SET

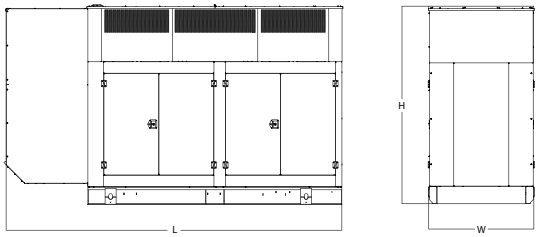
EPA Certified Stationary Emergency

DIMENSIONS AND WEIGHTS*



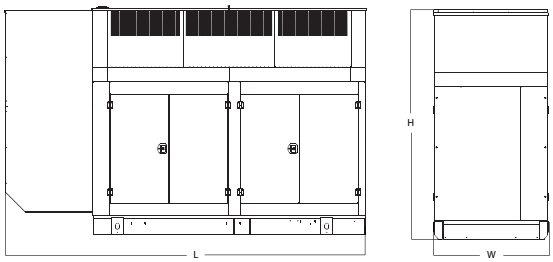
LEVEL 1 SOUND ATTENUATED ENCLOSURE

Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg)**	
			Steel	Aluminum
No Tank	-	200.2 (5,085) x 57.5 (1,461) x 90.8 (2,306)	9442 (4283)	8384 (3803)
9.0	183 (693)	200.2 (5,085) x 57.5 (1,461) x 103.8 (2,637)	10390 (4713)	9332 (4233)
21.5	438 (1,658)	200.2 (5,085) x 57.5 (1,461) x 115.8 (2,941)	10702 (4854)	9644 (4374)
34.0	693 (2,623)	200.2 (5,085) x 57.5 (1,461) x 127.8 (3,246)	11038 (5007)	9980 (4481)
46.4	946 (3,581)	208.3 (5,291) x 57.5 (1,461) x 131.8 (3,348)	12467 (5655)	11409 (5175)
65.0	1,325 (5,015)	277.8 (7,056) x 57.5 (1,461) x 130.2 (3,307)	13482 (6115)	12424 (5635)



LEVEL 2 SOUND ATTENUATED ENCLOSURE

Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg)**	
			Steel	Aluminum
No Tank	-	180.7 (4,590) x 57.5 (1,461) x 107.3 (2,725)	10015 (4543)	8630 (3915)
9.0	183 (693)	180.7 (4,590) x 57.5 (1,461) x 120.3 (3,056)	10963 (4973)	9578 (4345)
21.5	438 (1,658)	180.7 (4,590) x 57.5 (1,461) x 132.3 (3,360)	11275 (5114)	9890 (4486)
34.0	693 (2,623)	180.7 (4,590) x 57.5 (1,461) x 144.3 (3,665)	11611 (5267)	10226 (4638)
46.4	946 (3,581)	208.3 (5,291) x 57.5 (1,461) x 148.3 (3,767)	13040 (5915)	11655 (5287)
65.0	1,325 (5,015)	277.8 (7,056) x 57.5 (1,461) x 146.7 (3,726)	14055 (6375)	12670 (5747)



LEVEL 2 SOUND ATTENUATED ENCLOSURE WITH DAMPERS

Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg)**	
			Steel	Aluminum
No Tank	-	180.7 (4,590) x 57.5 (1,461) x 114.5 (2,908)	10228 (4639)	8844 (4012)
9.0	183 (693)	180.7 (4,590) x 57.5 (1,461) x 127.5 (3,239)	11176 (5069)	9792 (4442)
21.5	438 (1,658)	180.7 (4,590) x 57.5 (1,461) x 139.5 (3,543)	11488 (5211)	10104 (4583)
34.0	693 (2,623)	180.7 (4,590) x 57.5 (1,461) x 151.5 (3,848)	11824 (5363)	10440 (3736)
46.4	946 (3,581)	208.3 (5,291) x 57.5 (1,461) x 155.5 (3,950)	13253 (6011)	11869 (5384)
65.0	1,325 (5,015)	277.8 (7,056) x 57.5 (1,461) x 154 (3,912)	14268 (6472)	12884 (5844)

* 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.

** Weights shown represent maximum configurations with heaviest available options installed.

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