SD900 & MD900 | 30.6 L | 900 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

Standby Power Rating

900 kW, 1,125 kVA, 60 Hz

*Assembled in the USA using domestic and foreign parts

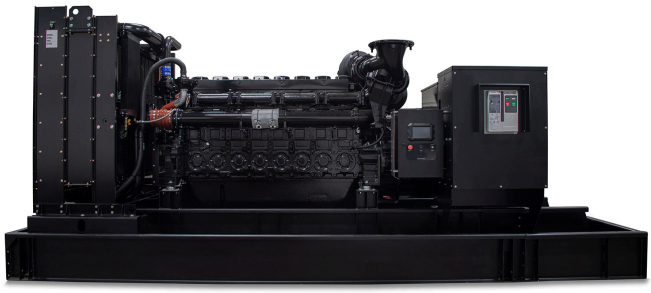

Image used for illustration purposes only

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

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.

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GENERAC | INDUSTRIAL POWER

STANDARD FEATURES

ENGINE SYSTEM
- Oil Drain Extension
- Air Filter Restriction Indicator
- Air Cleaner
- 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)
- Engine Coolant Heater

FUEL SYSTEM
- Flexible Fuel Lines
- Primary and Secondary Fuel Filter

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
- Main Line Circuit Breaker
- Class H Insulation Material
- 2/3 Pitch
- Skewed Stator
- Permanent Magnet Excitation
- Sealed Bearing
- Full Load Capacity Alternator

GENERATOR SET
- Separation of Circuits - High/Low Voltage
- Separation of Circuits - Multiple Breakers
- Standard Factory Testing
- 2 Year Limited Warranty (Standby Rated Units)
- Spring Isolators

ENCLOSURE (If Selected)
- Structural Steel Sub-Base
- Sub-Base Lifting Eyes
- Enamel Finish
- Zinc Plated Fasteners
- Zinc Plated Cast Aluminum Keylock Door Handles
- Heavy Duty Stainless Steel Hinges with Removable Brass Pins
- Modular Construction

FUEL TANKS (If Selected)
- UL 142/ULC S601
- Double Wall
- Vents
- Factory Pressure Tested (2 psi)
- Rupture Basin Alarm
- Fuel Level
- Check Valve In Supply and Return Lines
- Stainless Steel Hardware
- Fuel Line Hose
- Fuel Line Hose and Separator
- Electronic Fuel Level
- Secondary Fuel Filter

CONTROL SYSTEM

DSE G8601 Controller

The G8601 is a genset controller with integral heater designed for multiple application environments.

Key Features
- Advanced PLC Functionality
- Multi-Purpose PIDs
- Virtual Inputs
- On-Screen Mimic (SLDs)
- Multi-Level Pin Protected Front Panel Editor
- Integral LCD Display Heater
- Enhanced High-Resolution 240 x 128 Pixel Display
- 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

More Features
- Uses Engine ECU
- Digital AVR Support
- Multiple Language Support
- Three Phase Generator Sensing & Protection
- Three Phase Bus Sensing
- Generator Current, Protection & 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

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CONFIGURABLE OPTIONS

ENGINE SYSTEM
- Critical Grade Silencer
- Hospital Grade Silencer
- CCV (Closed Crankcase Ventilation)
- Oil Heater
- Radiator Duct Flange
- Radiator Stone Guard

ELECTRICAL SYSTEM
- 20A UL Listed Battery Charger
- Battery Warmer

ALTERNATOR SYSTEM
- Alternator Upsizing
- Anti-Condensation Heater

CIRCUIT BREAKER OPTIONS
- SD-Only: Main Line Circuit Breaker
- SD–Only: 2nd Main Line Circuit Breaker
- SD–Only: 3rd Main Line Circuit Breaker
- SD–Only: 4th Main Line Circuit Breaker
- Shunt Trip and Auxiliary Contact
- Electronic Trip Breakers

GENERATOR SET
- Spring Isolators (Standard/Seismic)
- MD–Only: 24 Position Load Center
- MD-Only: Extended Factory Testing

ENCLOSURE
- Level 0 Sound Attenuated
- Level 1 Sound Attenuated
- Level 2 Sound Attenuated
- Level 1 Sound Attenuated with Motorized Dampers
- Level 2 Sound Attenuated with Motorized Dampers
- Steel Enclosure
- Aluminum Enclosure
- Enclosure Light Kit
- Up to 200 MPH Wind Load Rating (Contact Factory for Availability)
- Louvers with Gravity Dampers
- Enclosure Heaters (with Motorized Dampers Only)
- Door Open Alarm Horn

FUEL TANKS (Size On Last Page)
- Overfill Prevention Valve
- Fuel Fill Drop Tube
- 5 Gal Spill Return Hose
- Tank Risers
- 90% High Fuel Level Alarm
- Vent Extensions
- Fire Rated Fuel Hose

CONTROL SYSTEM
- NFPA 110 Level 1 Compliant 21-Light Remote Annunciator
- Remote Output Relays (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)
- 100 dB Alarm Horn
- Ground Fault Annunciator
- 10 Amp Engine Run Relay
- 120V GFCI and 240V Outlet
- Oil Temperature Indication and Alarm
- Flush Mount Annunciator Kit
- 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
- Fuel Cooler
- High Lift Pumps

ALTERNATOR SYSTEM
- MD-Only: 2nd Breaker System
- MD-Only: 3rd Breaker System
- MD-Only: 4th Breaker System
- Unit Mounted Load Banks
- Medium Voltage Alternators

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

GENERATOR SET
- Special Testing

ENCLOSURE
- Custom Enclosure

FUEL TANKS
- UL2085 Tank
- Special Fuel Tanks

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APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

General

Make	Perkins
EPA Emissions Compliance	Tier 2
EPA Emissions Reference	See Emissions Data Sheet
Cylinder #	8
Type	In-Line
Displacement - in^3 (L)	1,865 (30.6)
Bore - in (mm)	6.3 (160)
Stroke - in (mm)	7.48 (190)
Compression Ratio	14.1
Intake Air Method	Turbocharged/Intercooled
Cylinder Head	4–Valve

Engine Governing

Governor	Electronic
Frequency Regulation (Steady State)	±0.25%

Lubrication System

Oil Pump Type	Gear Driven
Oil Filter Type	Full Flow Spin-On Cartridge
Crankcase Capacity - qt (L)	162 (153)

Cooling System

Cooling System Type	Pressurized Closed
Fan Type	Pusher
Fan Diameter - in (mm)	49.2 (1,250)

Fuel System

Fuel Type	Ultra Low Sulfur Diesel #2
Fuel Specifications	ASTM
Fuel Filtering (Microns)	4
Fuel Inject Pump	MEUI
Injector Type	Electronic
Fuel Supply Line O.D. Minimum - in (mm)	0.59 (15.0)
Fuel Return Line O.D. Minimum - in (mm)	0.59 (15.0)

Engine Electrical System

System Voltage	24 VDC
Battery Charger Alternator	Standard
Battery Size	See Battery Index 0161970SBY
Battery Voltage	12 VDC
Ground Polarity	Negative

ALTERNATOR SPECIFICATIONS

Standard Model	K1000124Y22
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	Sealed Ball
Coupling	Direct Drive
Prototype Short Circuit Test	Yes
Voltage Regulator Type	Digital
Number of Sensed Phases	All
Regulation Accuracy (Steady State)	±0.25%

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OPERATING DATA

POWER RATINGS

	Standby	
Three-Phase 277/480 VAC @0.8pf	900 kW/1,125 kVA	Amps: 1,353
Three-Phase 346/600 VAC @0.8pf	900 kW/1,125 kVA	Amps: 1,083

MOTOR STARTING CAPABILITIES (SKVA)

skVA vs. Voltage Dip

277/480 VAC	30%		30%
K1000124Y22	3,100	L1136064N22	3,600
K1344064N22	4,000	L1280064N22	4,250
K1500064N22	4,500	L1412064N22	5,100

FUEL CONSUMPTION RATES*

Fuel Pump Lift- ft (m)
8.2 (2.5)

Total Fuel Pump Flow (Combustion + Return) - gph (Lph)
238 (900)

Diesel - gph (Lph)	
Percent Load	Standby
50%	34.5 (130.7)
75%	49.4 (187.1)
100%	63.8 (241.4)

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

COOLING

		Standby
Air Flow (Fan Air Flow Across Radiator)	cfm (m^3/min)	34,538 (978)
Coolant Flow	gpm (Lpm)	174 (660)
Coolant System Capacity	gal (L)	37 (140)
Maximum Operating Ambient Temperature	°F (°C)	122 (50)
Maximum Operating Ambient Temperature (Before Derate)	See Bulletin No. 0199280SSD	
Maximum Additional Radiator Backpressure	in H_2O (kPa)	0.8 (0.2)

COMBUSTION AIR REQUIREMENTS

	Standby
Flow at Rated Power cfm — (m^3/min)	2,726 (77.2)

ENGINE

		Standby
Rated Engine Speed	rpm	1,800
Horsepower at Rated kW**	hp	1,269
Piston Speed	ft/min (m/min)	2,244 (684)
BMEP	psi (kPa)	317 (2,184)

** See “Emissions Data Sheet” for maximum bHP for EPA and SCAQMD permitting purposes.

EXHAUST

		Standby
Exhaust Flow (Rated Output)	cfm (m^3/min)	6,343 (180)
Maximum Allowable Back Pressure (Post Turbo)	inHg (kPa)	4.1 (14.0)
Exhaust Temperature (Rated Output - Post Turbo)	°F (°C)	928 (498)

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 ISO3046, BS5514, ISO8528, and DIN6271 standards.
Standby - See Bulletin Standby - See Bulletin 10000018933

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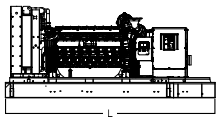
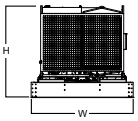
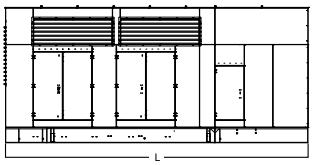
DIMENSIONS AND WEIGHTS*

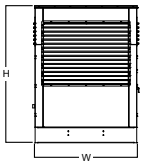




OPEN SET

Run Time - Hours)	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg) Unit Only
No Tank	—	209.8 (5,328) x 102.0 (2,590) x 91.5 (2,325)	17,326 - 20,463 (7,859 - 9,282)
12	840 (3,180)	210.0 (5,334) x 102.0 (2,590) x 107.5 (2,731)	
24	1,680 (6,359)	329.0 (8,357) x 102.0 (2,590) x 109.5 (2,781)	
24	1,680 (6,359)	210.0 (5,334) x 102.0 (2,590) x 121.5 (3,086)	
36	2,520 (9,539)	210.0 (5,334) x 102.0 (2,590) x 134.5 (3,416)	





LEVEL 0 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	—	304.0 (7,721) x 105.7 (2,685) x 137.0 (3,481)	3,761 (1,706)	Contact Factory
12	840 (3,180)	304.0 (7,721) x 105.7 (2,685) x 148.0 (3,759)		
12	840 (3,180)	329.0 (8,357) x 105.7 (2,685) x 148.0 (3,759)		
24	1,680 (6,359)	329.0 (8,357) x 105.7 (2,685) x 155.0 (3,937)		
24	1,680 (6,359)	329.0 (8,357) x 105.7 (2,685) x 155.0 (3,937)		
36	2,520 (9,539)	304.0 (7,722) x 105.7 (2,685) x 166.0 (4,216)		
36	2,520 (9,539)	329.0 (8,357) x 105.7 (2,685) x 163.0 (4,140)		
48	3,360 (12,719)	304.0 (7,722) x 105.7 (2,685) x 175.0 (4,445)		
48	3,360 (12,719)	329.0 (8,357) x 105.7 (2,685) x 171.0 (4,343)		
72	5,040 (19,078)	329.0 (8,357) x 105.7 (2,685) x 187.0 (4,750)		

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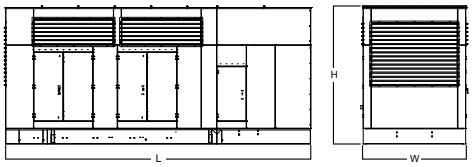
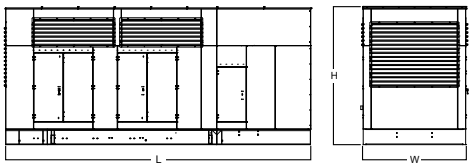
DIMENSIONS AND WEIGHTS*



LEVEL 1 SOUND ATTENUATED ENCLOSURE

Run Time - Hours)	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg) Enclosure Only	
			Steel	Aluminum
No Tank	—	304.0 (7,721) x 105.7 (2,685) x 137.0 (3,481)	5,005 (2,270)	Contact Factory
12	840 (3,180)	304.0 (7,721) x 105.7 (2,685) x 148.0 (3,759)		
12	840 (3,180)	329.0 (8,357) x 105.7 (2,685) x 148.0 (3,759)		
24	1,680 (6,359)	329.0 (8,357) x 105.7 (2,685) x 155.0 (3,937)		
24	1,680 (6,359)	329.0 (8,357) x 105.7 (2,685) x 155.0 (3,937)		
36	2,520 (9,539)	304.0 (7,722) x 105.7 (2,685) x 166.0 (4,216)		
36	2,520 (9,539)	329.0 (8,357) x 105.7 (2,685) x 163.0 (4,140)		
48	3,360 (12,719)	304.0 (7,722) x 105.7 (2,685) x 175.0 (4,445)		
48	3,360 (12,719)	329.0 (8,357) x 105.7 (2,685) x 171.0 (4,343)		
72	5,040 (19,078)	329.0 (8,357) x 105.7 (2,685) x 187.0 (4,750)		



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	—	304.0 (7,721) x 105.7 (2,685) x 137.0 (3,481)	6,901 (3,130)	Contact Factory
12	840 (3,180)	304.0 (7,721) x 105.7 (2,685) x 148.0 (3,759)		
12	840 (3,180)	329.0 (8,357) x 105.7 (2,685) x 148.0 (3,759)		
24	1,680 (6,359)	329.0 (8,357) x 105.7 (2,685) x 155.0 (3,937)		
24	1,680 (6,359)	329.0 (8,357) x 105.7 (2,685) x 155.0 (3,937)		
36	2,520 (9,539)	304.0 (7,722) x 105.7 (2,685) x 166.0 (4,216)		
36	2,520 (9,539)	329.0 (8,357) x 105.7 (2,685) x 163.0 (4,140)		
48	3,360 (12,719)	304.0 (7,722) x 105.7 (2,685) x 175.0 (4,445)		
48	3,360 (12,719)	329.0 (8,357) x 105.7 (2,685) x 171.0 (4,343)		
72	5,040 (19,078)	329.0 (8,357) x 105.7 (2,685) x 187.0 (4,750)		

*All measurements are approximate and for estimation purposes only.

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.

SPEC SHEET

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