

SD1250 & MD1250 | 45.84 L | 1250 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

GENERAC INDUSTRIAL
ENERGY

Standby Power Rating

1250 kW, 1,562.5 kVA, 60 Hz



*Assembled in the USA using domestic and foreign parts

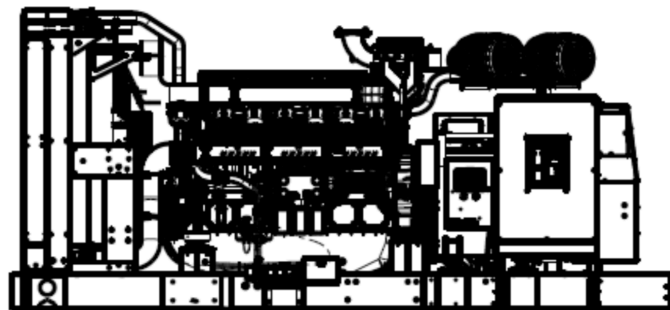


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Codes and Standards

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, 20



NEC700, 701, 702, 708



NEMA ICS10, MG1, 250, ICS6,
AB1



ANSI C62.41, ISO 8528

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 Filter Restriction Indicator
- Air Cleaner
- Level 1 Fan and Belt Guards
- Stainless Steel Flexible Exhaust Connection
- Factory Filled Oil and Coolant
- Engine Coolant Heater
- Radiator Stone Guard
- Oil Cooler

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
- Coolant Catch Can
- Finger Guard

ELECTRICAL SYSTEM

- Battery Charging Alternator
- Battery Cables
- Battery Tray
- Rubber-Booted Engine Electrical Connections
- Solenoid Activated Starter Motor
- 20A UL Listed Battery Charger

ALTERNATOR SYSTEM

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

GENERATOR SET

- Separation of Circuits - High/Low Voltage
- Separation of Circuits - Multiple Breakers
- Standard Factory Testing
- 2 Year Limited Warranty (Standby Rated Units)
- Rubber Encapsulated Isolator

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 (I²T 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 (I²T 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

CONFIGURABLE OPTIONS

ENGINE SYSTEM

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

ELECTRICAL SYSTEM

- Battery Warmer
- Redundant Starting System
- Unit Mounted Load Center

ALTERNATOR SYSTEM

- Alternator Upsizing
- Anti-Condensation Heater
- RTD (Resistance Temperature Detector)

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

- Isolators (Standard/Seismic)
- Rubber Encapsulated Isolator
- MD-Only: Extended Factory Testing

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 Outlet with Protective Cover
- Oil Temperature Indication and Alarm
- Flush Mount Annunciator Kit
- NFPA 20 Compliant

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

ALTERNATOR SYSTEM

- MD-Only: 2nd Breaker System
- MD-Only: 3rd Breaker System
- MD-Only: 4th Breaker System
- Unit Mounted Load Banks

CONTROL SYSTEM

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

GENERATOR SET

- Special Testing

APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

General

Make	Perkins
EPA Emissions Compliance	Tier 2
EPA Emissions Reference	Contact Factory
Cylinder #	12
Type	V Arrangement
Displacement - in ³ (L)	2,797 (45.84)
Bore - in (mm)	6.3 (160)
Stroke - in (mm)	7.48 (190)
Compression Ratio	13:8:1
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)	166.4 (157.5)

Cooling System

Cooling System Type	Pressurized Closed
Fan Type	Pusher
Fan Diameter - in (mm)	65 (1651)

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 ID. Minimum - in (mm)	0.75 (19)
Fuel Return Line ID. Minimum - in (mm)	0.75 (19)

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	K1260064N2M4
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	1250 kW/1,562.5 kVA	Amps: 1,879.4
Three-Phase 346/600 VAC @0.8pf	1250 kW/1,562.5 kVA	Amps: 1,503.5

MOTOR STARTING CAPABILITIES (SKVA)

skVA vs. Voltage Dip			
277/480 VAC	30%	346/600 VAC	30%
K1260044N2M4	3,900	L1330044N2M4	4,600
K1500044N2M4	4,200	L1650044N2M4	4,800
K1700044N2M4	5,700		

FUEL CONSUMPTION RATES*

Fuel Pump Lift- ft (m)	Diesel - gph (Lph)	
	Percent Load	Standby
8.2 (2.5)	25%	27.4 (103.6)
	50%	48.1 (182.1)
	75%	70.2 (265.8)
	100%	90.2 (341.5)
Total Fuel Pump Flow (Combustion + Return) - gph (Lph)		
693 (2,622)		

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

COOLING

		Standby
Air Flow (Fan Air Flow Across Radiator)	cfm (m ³ /min)	64,000 (1812.3)
Coolant Flow	gpm (Lpm)	317 (1200)
Coolant System Capacity	gal (L)	59 (223)
Maximum Operating Ambient Temperature	°F (°C)	122 (50)
Maximum Operating Ambient Temperature (Before Derate)	Contact Factory	
Maximum Additional Radiator Backpressure	in H ₂ O (kPa)	0.5 (0.124)

COMBUSTION AIR REQUIREMENTS

	Standby
Flow at Rated Power cfm — (m ³ /min)	4241.3 (120.1)

ENGINE

		Standby
Rated Engine Speed	rpm	1,800
Horsepower at Rated kW**	hp	1,853
Piston Speed	ft/min (m/min)	2,244 (683.9)
BMEP	psi (kPa)	(291.4) 2009

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

EXHAUST

		Standby
Exhaust Flow (Rated Output)	cfm (m ³ /min)	9831.6 (278.4)
Maximum Allowable Back Pressure (Post Turbo)	inHg (kPa)	2.9 (10)
Exhaust Temperature (Rated Output - Post Turbo)	°F (°C)	847.4 (453)

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

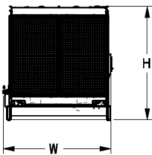
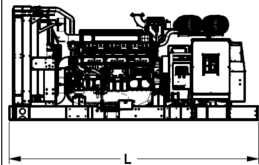
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DIMENSIONS AND WEIGHTS*



OPEN SET		L x W x H - in (mm)	Weight - lbs (kg) Unit Only
Run Time - Hours	Usable Capacity - Gal (L)		
No Tank	—	218.9 (5,560) x 94.4 (2,398)x 98.6 (2,506)	23,488 - 24,987 (10,654 - 11,334)

*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.