

SD175 | 6.7 L | 175 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

Standby Power Rating

175 kW, 219 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



CSA C22.2, B149



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
- Fan Guard
- Stainless Steel Flexible Exhaust Connection
- Factory Filled Oil and Coolant
- Radiator Duct Adapter (Open Set Only)
- Engine Coolant Heater
- Critical Silencer

FUEL SYSTEM

- Fuel Lockoff Solenoid
- Primary 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

ENCLOSURE (If Selected)

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

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

TANKS (If Selected)

- UL 142
- 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



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

- Oil Heater
- Fan and Belt Guards
- Air Filter Restriction Indicator
- Radiator Stone Guard

FUEL SYSTEM

- Flexible Fuel Line - NPT Connection

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
- 8 Position Load Center
- Spring or Pad 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
- Up to 200 MPH Wind Load Rating (Contact Factory for Availability)
- AC/DC Enclosure Lighting Kit
- Enclosure Ambient Heater
- Damper Alarm

TANKS (Size 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 Indicator 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
- Ground Fault Annunciation
- 120V GFCI and 240V Outlet
- Flush Mount Annunciator Kit
- Remote Communication - Modem
- 10A Engine Run Relay

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

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

GENERATOR SET

- Special Testing
- Battery Box

ALTERNATOR SYSTEM

- 3rd Breaker System

TANKS

- UL2085 Tank
- ULC S-601 Tank
- Special Fuel Tanks

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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)	408.86 (6.7)
Bore: in (mm)	4.09 (104)
Stroke: in (mm)	5.2 (128)
Compression Ratio	16.5:1
Intake Air Method	Turbocharged/Aftercooled
Cylinder Head Type	4 - Valve
Piston Type	Aluminum Alloy
Crankshaft Type	Forged Steel

Engine Governing

Governor	Electronic Isochronous
Frequency Regulation (Steady State)	±0.25%

Lubrication System

Oil Pump	Gear
Oil Filter Type	Full-Flow Cartridge
Engine Oil Capacity: qt (L)	20.7 (19.6)

Cooling System

Cooling System Type	Closed
Water Pump Type	Belt Driven Centrifugal
Fan Type	Pusher
Fan Speed (RPM)	2,538
Fan Diameter - in (mm)	26.9 (660)

Fuel System

Fuel Type	Ultra Low Sulfur Diesel Fuel
Fuel Specifications	ASTM
Fuel Filtering (Microns)	5
Fuel Pump Type	Engine Driven Gear
Injector Type	Electronic
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	12 VDC
Battery Charger Alternator	Standard
Battery Size	See Battery Index 0161970SBY
Battery Voltage	12 VDC
Ground Polarity	Negative (-)

ALTERNATOR SPECIFICATIONS

Standard Model	K0200124Y21
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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OPERATING DATA

POWER RATINGS

	Standby	
Single-Phase 120/240 VAC @1.0pf	175 kW	Amps: 729
Three-Phase 120/208 VAC @0.8pf	175 kW	Amps: 607
Three-Phase 120/240 VAC @0.8pf	175 kW	Amps: 526
Three-Phase 277/480 VAC @0.8pf	175 kW	Amps: 263
Three-Phase 346/600 VAC @0.8pf	175 kW	Amps: 210

MOTOR STARTING CAPABILITIES (SKVA)

skVA vs. Voltage Dip			
277/480 VAC	30%	208/240 VAC	30%
K0200124Y21	478	K0200124Y21	361
K0250124Y21	630	K0250124Y21	506
K0300124Y21	790	K0300124Y21	609

FUEL CONSUMPTION RATES*

Fuel Pump Lift- ft (m)	Diesel - gph (Lph)	
	Percent Load	Standby
3 (1)	25%	3.9 (14.8)
	50%	7.3 (27.6)
Total Fuel Pump Flow (Combustion + Return) - gph (Lph)	75%	10.5 (39.7)
29.0 (110.2)	100%	13.5 (51.1)

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

COOLING

		Standby
Coolant Flow	gpm (Lpm)	44.6 (168.8)
Coolant System Capacity	gal (L)	7.5 (28.4)
Heat Rejection to Coolant	BTU/hr (kW)	497,718 (146)
Inlet Air	scfh (m ³ /hr)	7,946 (13,502)
Maximum Operating Ambient Temperature	°F (°C)	122 (50)
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 - (m ³ /min)	470 (13.3)

ENGINE

		Standby
Rated Engine Speed	RPM	1,800
Horsepower at Rated kW**	hp	279
Piston Speed	ft/min (m/min)	1,559 (475)
BMEP	psi (kPa)	257 (1,772)

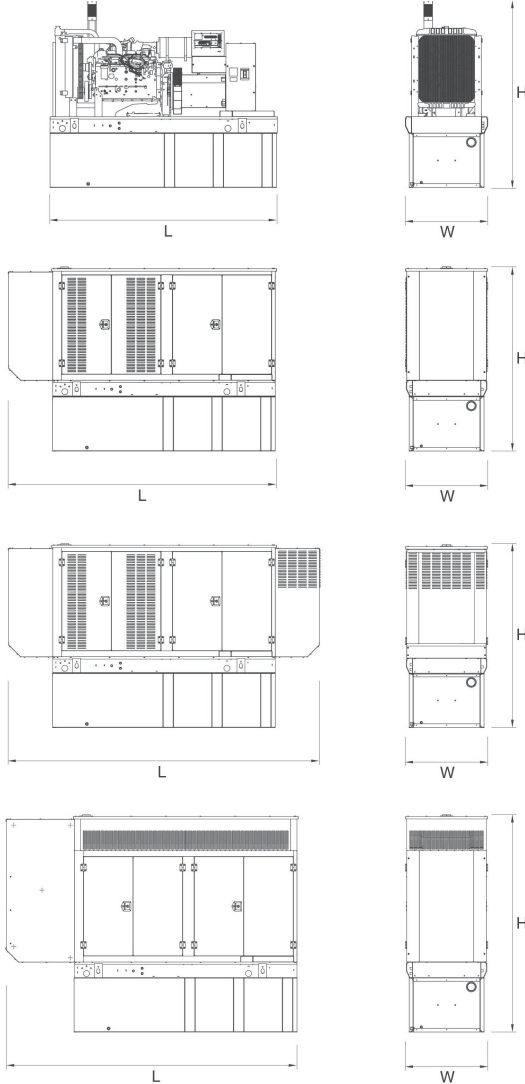
** See "Emissions Data Sheet" for maximum bHP for EPA and SCAQMD permitting purposes.

EXHAUST

		Standby
Exhaust Flow (Rated Output)	scfm (m ³ /min)	1,212 (34.3)
Max. Allowable Backpressure	inHg (kPa)	1.5 (.5.1)
Exhaust Temperature (Rated Output)	°F (°C)	1,040 (560)

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 (Includes Exhaust Flex)

Run Time Hours**	Usable Capacity Gal (L)	L x W x H - in (mm)	Weight - lbs (kg)	
			Steel	Aluminum
No Tank	—	117.7 (2,991) x 49.7 (1,262) x 57.2 (1,453)	3,614 (1,639)	
9	134 (507)	117.7 (2,991) x 49.7 (1,262) x 70.2 (1,783)	4,398 (1,969)	
23	322 (1,219)	117.7 (2,991) x 49.7 (1,262) x 82.2 (2,088)	4,686 (2,125)	
32	440 (1,665)	117.7 (2,991) x 49.7 (1,262) x 94.2 (2,393)	4,979 (2,260)	
37	510 (1,930)	136.0 (3,455) x 53.0 (1,346) x 94.2 (2,393)	6,639 (3,011)	
51	693 (2,623)	136 (3,455) x 53.0 (1,346) x 98.2 (2,493)	5,179 (2,349)	
52	705 (2,668)	156.7 (3,980.2) x 53.0 (1,346) x 96.6 (2,453)	5,720 (2,594)	
70	946 (3,580)	208.3 (5291.5) x 53.0 (1,346) x 98.2 (2,493)	6,639 (3,011)	
98	1,325 (5,015)	277.8 (7,055) x 53.0 (1,346) x 98.2 (2,493)	7,654 (3,472)	

WEATHER PROTECTED ENCLOSURE

Run Time Hours**	Usable Capacity Gal (L)	L x W x H - in (mm)	Weight - lbs (kg)	
			Steel	Aluminum
No Tank	—	143.0 (3,633) x 50.4 (1,280) x 68.2 (1,529)	4,511 (2,046)	4,052 (1,838)
9	134 (507)	143.0 (3,633) x 50.4 (1,280) x 81.2 (1,859)	5,295 (2,376)	4,836 (2,168)
23	322 (1,219)	143.0 (3,633) x 50.4 (1,280) x 93.2 (2,164)	5,583 (2,532)	5,124 (2,324)
32	440 (1,665)	143.0 (3,633) x 50.4 (1,280) x 105.2 (2,269)	5,876 (2,667)	5,417 (2,459)
37	510 (1,930)	143.0 (3,633) x 53.0 (1,346) x 105.2 (2,469)	7,536 (3,418)	7,077 (3,210)
51	693 (2,623)	143.0 (3,633) x 53.0 (1,346) x 109.2 (2,569)	6,076 (2,756)	5,617 (2,548)
52	705 (2,668)	156.7 (3980.2) x 53.0 (1,346) x 107.6 (2,529)	6,617 (3,001)	6,158 (2,793)
70	946 (3,580)	208.3 (5291.5) x 53.0 (1,346) x 109.2 (2,569)	7,536 (3,418)	7,077 (3,210)
98	1,325 (5,015)	277.8 (7,055) x 53.0 (1,346) x 109.2 (2,569)	8,551 (3,879)	8,092 (3,671)

LEVEL 1 ACOUSTIC ENCLOSURE

Run Time Hours**	Usable Capacity Gal (L)	L x W x H - in (mm)	Weight - lbs (kg)	
			Steel	Aluminum
No Tank	—	168.5 (4,279) x 50.4 (1,280) x 68.2 (1,731)	4,798 (2,176)	4,176 (1,894)
9	134 (507)	168.5 (4,279) x 50.4 (1,280) x 81.2 (2,061)	5,582 (2,506)	4,960 (2,224)
23	322 (1,219)	168.5 (4,279) x 50.4 (1,280) x 93.2 (2,366)	5,870 (2,662)	5,248 (2,380)
32	440 (1,665)	168.5 (4,279) x 50.4 (1,280) x 105.2 (2,671)	6,163 (2,797)	5,541 (2,515)
37	510 (1,930)	168.5 (4,279) x 53.0 (1,346) x 105.2 (2,671)	7,823 (3,548)	7,201 (3,266)
51	693 (2,623)	161.7 (4,108.5) x 53.0 (1,346) x 109.2 (2,771)	6,363 (2,886)	5,741 (2,604)
52	705 (2,668)	182.4 (4,633.7) x 53.0 (1,346) x 107.6 (2,731)	6,664 (8,872)	6,042 (2,590)
70	946 (3,580)	234.0 (5,945) x 53.0 (1,346) x 109.2 (2,771)	7,823 (3,548)	7,201 (3,266)
98	1,325 (5,015)	303.5 (7,708.5) x 53.0 (1,346) x 132.7 (3,370)	8,835 (4,009)	8,216 (3,727)

LEVEL 2 ACOUSTIC ENCLOSURE WITH MOTORIZED DAMPERS

Run Time Hours**	Usable Capacity Gal (L)	L x W x H - in (mm)	Weight - lbs (kg)	
			Steel	Aluminum
No Tank	—	143.0 (3,633) x 50.4 (1,280) x 91.7 (2,330)	4,989 (2,263)	4,258 (1,931)
9	134 (507)	143.0 (3,633) x 50.4 (1,280) x 104.7 (2,660)	5,773 (2,593)	5,042 (2,261)
23	322 (1,219)	143.0 (3,633) x 50.4 (1,280) x 116.7 (2,965)	6,061 (2,749)	5,330 (2,417)
32	440 (1,665)	143.0 (3,633) x 50.4 (1,280) x 128.7 (3,270)	6,354 (2,884)	5,623 (2,552)
37	510 (1,930)	143.0 (3,633) x 53.0 (1,346) x 128.7 (3,270)	8,014 (3,635)	7,283 (3,303)
51	693 (2,623)	143.0 (3,633) x 53.0 (1,346) x 132.7 (3,370)	6,554 (2,973)	5,823 (2,641)
52	705 (2,668)	156.7 (3980.2) x 53.0 (1,346) x 131.1 (3,330)	6,855 (2,959)	6,124 (2,627)
70	946 (3,580)	208.3 (5,291.5) x 53.0 (1,346) x 132.7 (3,370)	8,014 (3,635)	7,283 (3,303)
98	1,325 (5,015)	277.8 (7,055) x 53.0 (1,346) x 132.7 (3,370)	9,029 (4,096)	8,298 (3,764)