SD150 | 6.7 L | 150 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

GENERAC | INDUSTRIAL POWER

Standby Power Rating

150 kW, 188kVA, 60 Hz

USA ENGINEERED & BUILT*

*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 ensures 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 to ensure the most reliable engines 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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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
- Upward Facing Discharge Hood (Radiator and Exhaust)
- Stainless Steel Lift Off Door Hinges
- Stainless Steel Lockable Handles
- RhinoCoat™ - Textured Polyester Powder Coat Paint

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)

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

FUEL 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
- (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
- Oil Heater
- Level 1 Fan and Belt Guards (Enclosed Units Only)
- Air Filter Restriction Indicator
- Radiator Stone Guard (Open Set Only)
- Critical Silencer (Open Set Only)

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
- 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 Heater (with Motorized Dampers Only)
- Damper Alarm

FUEL TANKS (Size On Last Page)
- 8 in (203.2 mm) Fill Extension
- 13 in (330.2 mm) Fill Extension
- Overfill Protection Valve
- Return Hose
- Tank Risers
- 90% Fuel Level Switch
- 12' Above Grade Vent Extension
- Stainless Steel Fire Rated Fuel Hose

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)
- 100 dB Alarm Horn
- Ground Fault Annunciator
- 120V GFCI and 240V Outlets
- Damper Alarm Contacts (with Motorized Dampers Only)
- Remote Communication - Modem
- 10A Engine Run Relay
- Oil Temperature Indication and Alarm

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/Outputs

GENERATOR SET
- Special Testing

ALTERNATOR SYSTEM
- 3rd Breaker System

TANKS
- UL2085 Tank
- Stainless Steel Tank

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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 (660)

Fuel System

Fuel Type	Ultra Low Sulfur Diesel Fuel #2
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	K0150124Y21
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	150 kW	Amps: 625
Three-Phase 120/208 VAC @0.8pf	150 kW	Amps: 520
Three-Phase 120/240 VAC @0.8pf	150 kW	Amps: 451
Three-Phase 277/480 VAC @0.8pf	150 kW	Amps: 226
Three-Phase 346/600 VAC @0.8pf	150 kW	Amps: 180

MOTOR STARTING CAPABILITIES (SKVA)

skVA vs. Voltage Dip

120/240 VAC 1Ø	30%	277/480 VAC 3Ø	30%	208/240 VAC 3Ø	30%
A0150044N21	260	K0150124Y21	326	K0150124Y21	244
A0200044N21	459	K0200124Y21	478	K0200124Y21	361
		K0250124Y21	630	K0250124Y21	506

FUEL CONSUMPTION RATES*

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

Total Fuel Pump Flow (Combustion + Return) - gph (Lph)
29 (110.2)

Diesel - gph (Lph)	
Percent Load	Standby
25%	3.3 (12.5)
50%	6.2 (23.5)
75%	8.8 (33.5)
100%	11.2 (42.2)

*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)	412,900 (121))
Inlet Air	scfm (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_2O (kPa)	0.5 (0.12)

COMBUSTION AIR REQUIREMENTS

	Standby
Flow at rated power scfm - (m^3 /min)	440 (12.5)

ENGINE

		Standby
Rated Engine Speed	RPM	1,800
Horsepower at Rated kW**	hp	240
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)	1,050 (29.7)
Max. Allowable Backpressure	inHg (kPa)	1.5 (.5.1)
Exhaust Temperature (Rated Output)	°F (°C)	895 (479)

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 0187500SSB Prime - See Bulletin 0187510SSB

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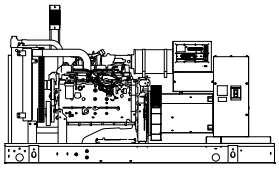
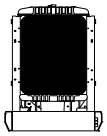
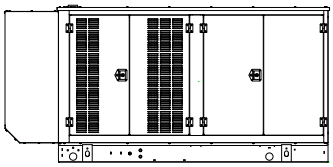
DIMENSIONS AND WEIGHTS*

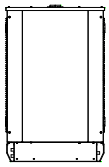




OPEN SET

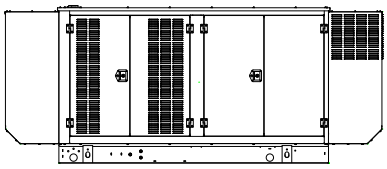
Run Time Hours**	Usable Capacity Gal (L)	L x W x H - in (mm)	Weight - lbs (kg)
No Tank	—	117.9 (2,996) x 49.7 (1,262) x 57.2 (1,453)	3,333 - 3,920 (1,512 - 1,778)
11	134 (507)	117.9 (2,996) x 49.7 (1,262) x 70.2 (1,783)	4,117 - 4,704 (1,868 - 2,134)
28	322 (1,219)	117.9 (2,996) x 49.7 (1,262) x 82.2 (2,088)	4,405 - 4,992 (1,998 - 2,264)
45	510 (1,930)	117.9 (2,996) x 49.7 (1,262) x 94.2 (2,393)	4,698 - 5,285 (2,133- 2,399)
39	440 (1,666)	156.7 (3,980) x 49.7 (1,262) x 81.2 (2,063)	4,776 - 5,363 (2,051 - 2,317)
61	693 (2,623)	136.0 (3,455) x 53.0 (1,346) x 97.7 (2,482)	4,928 - 5,515 (2,237 - 2,503)
62	705 (2,668)	156.7 (3,980) x 49.7 (1,262) x 93.2 (2,367)	5,199 - 5,786 (2,208 - 2,474)
84	946 (3,580)	208.3 (5,291) x 53.0 (1,346) x 98.2 (2,493)	6,358 - 6,945 (2,884 - 3,150)
118	1,325 (5,015)	277.8 (7,055) x 53.0 (1,346) x 96.6 (2,453)	7,373 -7,960 (3,345 - 3,611)

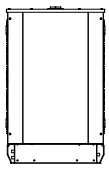




WEATHER PROTECTED ENCLOSURE

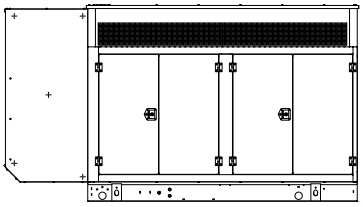
Run Time Hours**	Usable Capacity Gal (L)	L x W x H - in (mm)	Weight - lbs (kg) (Enclosure Only)
No Tank	—	143.0 (3,633) x 50.4 (1,280) x 68.2 (1,529)	Steel: 898 (407) Aluminum: 439 (199)
11	134 (507)	143.0 (3,633) x 50.4 (1,280) x 81.2 (1,859)	
28	322 (1,219)	143.0 (3,633) x 50.4 (1,280) x 93.2 (2,164)	
45	510 (1,930)	143.0 (3,633) x 50.4 (1,280) x 105.2 (2,269)	
39	440 (1,666)	143.0 (3,633) x 53.0 (1,346) x 105.2 (2,469)	
61	693 (2,623)	143.0 (3,633) x 53.0 (1,346) x 109.2 (2,569)	
62	705 (2,668)	156.7 (3980.2) x 53.0 (1,346) x 107.6 (2,529)	
84	946 (3,580)	208.3 (5291.5) x 53.0 (1,346) x 109.2 (2,569)	
118	1,325 (5,015)	277.8 (7,055) x 53.0 (1,346) x 109.2 (2,569)	

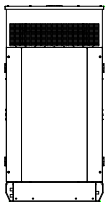




LEVEL 1 SOUND ATTENUATED ENCLOSURE

Run Time Hours**	Usable Capacity Gal (L)	L x W x H - in (mm)	Weight - lbs (kg) (Enclosure Only)
No Tank	—	168.5 (4,279) x 50.4 (1,280) x 68.2 (1,732)	Steel: 1,186 (537) Aluminum: 563 (255)
11	134 (507)	168.5 (4,279) x 50.4 (1,280) x 81.2 (2,062)	
28	322 (1,219)	168.5 (4,279) x 50.4 (1,280) x 93.2 (2,367)	
45	510 (1,930)	168.5 (4,279) x 50.4 (1,280) x 105.2 (2,672)	
39	440 (1,666)	168.5 (4,279) x 50.4 (1,280) x 92.2 (2,342)	
61	693 (2,623)	168.5 (4,279) x 53.0 (1,346) x 108.7 (2,761)	
62	705 (2,668)	168.5 (4,279) x 50.4 (1,280) x 104.2 (2,646)	
84	946 (3,580)	208.3 (5,291) x 53.0 (1,346) x 109.2 (2,772)	
118	1,325 (5,015)	277.8 (7,055) x 53.0 (1,346) x 107.6 (2,732)	





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	—	143.0 (3,633) x 50.4 (1,280) x 91.7 (2,330)	Steel: 1,377 (624) Aluminum: 645 (292)
11	134 (507)	143.0 (3,633) x 50.4 (1,280) x 104.7 (2,660)	
28	322 (1,219)	143.0 (3,633) x 50.4 (1,280) x 116.7 (2,965)	
45	510 (1,930)	143.0 (3,633) x 50.4 (1,280) x 128.7 (3,270)	
39	440 (1,666)	156.7 (3,980) x 50.4 (1,280) x 115.7 (2,940)	
61	693 (2,623)	143.0 (3,633) x 53.0 (1,346) x 132.2 (3,359)	
62	705 (2,668)	156.7 (3,980) x 50.4 (1,280) x 127.7 (3,244)	
84	946 (3,580)	208.3 (5,291) x 53.0 (1,346) x 132.7 (3,370)	
118	1,325 (5,015)	277.8 (7,055) x 53.0 (1,346) x 131.1 (3,330)	

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