SD230 | 8.7L | 230 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

Standby Power Rating
230 kW, 288 kVA, 60 Hz

Prime Power Rating*
207 kW, 259 kVA, 60 Hz

*Built in the USA using domestic and foreign parts

*EPA Certified Prime ratings are not available in the US or its Territories
*Built in the USA using domestic and foreign parts

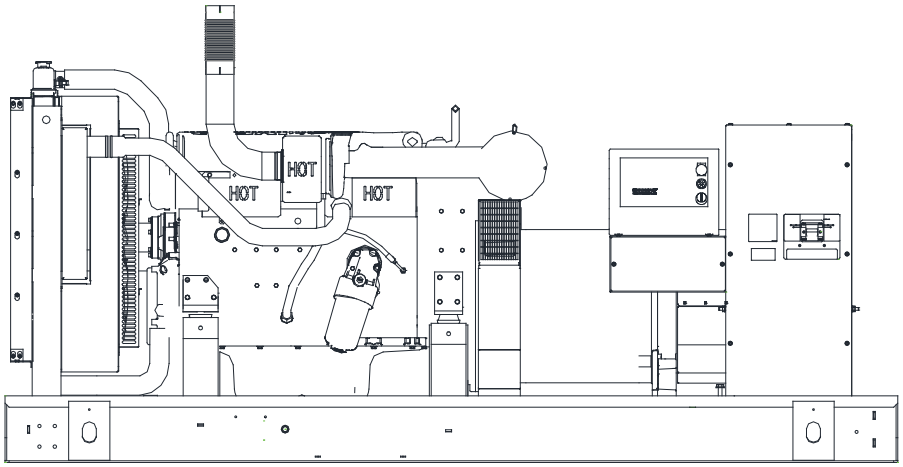

Image used for illustration purposes only

Codes and Standards

Generac products are designed to the following standards:

UL2200, UL508, UL142, UL489

NFPA 37, 70, 99, 110

NEC700, 701, 702, 708

ISO 3046, 7637, 8528, 9001

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 50 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.

SD230 | 8.7L | 230 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

GENERAC | INDUSTRIAL POWER

STANDARD FEATURES

ENGINE SYSTEM

- Oil Drain Extension
- Air Cleaner
- Fan Guard
- Stainless Steel Flexible Exhaust Connection
- Factory Filled Oil
- Radiator Duct Adapter (Open Set Only)
- Critical Exhaust Silencer (Enclosed Only)

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
- 120 VAC Coolant Heater

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 (Get Tolerance)
- 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)
- 1 Year Warranty (Prime Rated Units)
- Silencer Mounted in the Discharge Hood (Enclosed Only)

ENCLOSURE (if selected)

- Rust-Proof Fasteners with Nylon Washers to Protect Finish
- High Performance Sound-Absorbing Material (L1 & L2)
- Gasketed Doors
- Stamped Air-Intake Louvers
- Air Discharge Hoods for Radiator-Upward Pointing
- Stainless Steel Lift Off Door Hinges
- Stainless Steel Lockable Handles
- Rhino Coat™ - Textured Polyester Powder Coat

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
- Rhino Coat™ - Textured Polyester Powder Coat
- Stainless Steel Hardware

CONTROL SYSTEM

Control Panel

- Digital H Control Panel - Dual 4x20 Display
- Programmable Crank Limiter
- 7-Day Programmable Exerciser
- Special Applications Programmable PLC
- RS-232/485
- All-Phase Sensing DVR
- Full System Status
- Utility Monitoring
- 2-Wire Start Compatible
- Power Output (kW)
- Power Factor
- kW Hours, Total & Last Run
- Real/Reactive/Apparent Power
- All Phase AC Voltage
- All Phase Currents
- Oil Pressure
- Coolant Temperature
- Coolant Level
- Engine Speed
- Battery Voltage
- Frequency
- Date/Time Fault History (Event Log)
- Isochronous Governor Control
- Waterproof/Sealed Connectors
- Audible Alarms and Shutdowns
- Not in Auto (Flashing Light)
- Auto/Off/Manual Switch
- E-Stop (Red Mushroom-Type)
- NFPA110 Level I and II (Programmable)
- Customizable Alarms, Warnings, and Events
- Modbus protocol
- Predictive Maintenance algorithm
- Sealed Boards
- Password Parameter Adjustment Protection Single Point Ground
- 15 Channel Data Logging
- 0.2 msec High Speed Data Logging
- Alarm Information Automatically Comes Up On the Display

Alarms

- Oil Pressure (Pre-Programmable Low Pressure Shutdown)
- Coolant Temperature (Pre-Programmed High Temp Shutdown)
- Coolant Level (Pre-Programmed Low Level Shut-down)
- Low Fuel Pressure Alarm
- Engine Speed (Pre-Programmed Over Speed Shut-down)
- Battery Voltage Warning
- Alarms & Warnings Time and Date Stamped
- Alarms & Warnings for Transient and Steady State Conditions
- Snap Shots of Key Operation Parameters During Alarms & Warnings
- Alarms and Warnings Spelled Out (No Alarm Codes)

SD230 | 8.7L | 230 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

CONFIGURABLE OPTIONS

ENGINE SYSTEM

- ○ Oil Make-Up System
- ○ Oil Heater
- ○ Industrial Exhaust Silencer (Open Set)

FUEL SYSTEM

- ○ Flexible Fuel Lines
- ○ Primary Fuel Filter

ELECTRICAL SYSTEM

- ○ 10A UL Battery Charger
- ○ 2.5A 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

- ○ Gen-Link Communications Software (English Only)
- ○ Extended Factory Testing
- ○ IBC Seismic Certification
- ○ 8 Position Load Center
- ○ 2 Year Extended Warranty
- ○ 5 Year Warranty
- ○ 5 Year Extended Warranty
- ○ 7 Year Extended Warranty
- ○ 10 Year Extended Warranty

ENCLOSURE

- ○ Standard Enclosure
- ○ Level 1 Sound Attenuation
- ○ Level 2 Sound Attenuation
- ○ Steel Enclosure
- ○ Aluminum Enclosure
- ○ Up to 200 MPH Wind Load Rating*
- ○ AC/DC Enclosure Lighting Kit
- ○ 12 VDC Enclosure Light Kit
- ○ 120 VAC Enclosure Light Kit

CONTROL SYSTEM

- ○ 21-Light Remote Annunciator
- ○ Remote Relay Panel (8 or 16)
- ○ Oil Temperature Sender with Indication 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)
- ○ Remote Communication - Modem
- ○ Remote Communication - Ethernet
- ○ 10A Run Relay
- ○ Ground Fault Indication and Protection Functions

TANKS (SIZE ON LAST PAGE)

- ○ Electric Fuel Level
- ○ Mechanical Fuel Level
- ○ 8” Fill Extension
- ○ 13” Fill Extension
- ○ 19” Fill Extension

ENGINEERED OPTIONS

ENGINE SYSTEM

- ○ Coolant Heater Ball Valves
- ○ Fluid Containment Pans
- ○ Block Heaters

CONTROL SYSTEM

- ○ Spare Inputs (x4) / Outputs (x4) - H Panel Only
- ○ Battery Disconnect Switch

ALTERNATOR SYSTEM

- ○ 3rd Breaker System

GENERATOR SET

- ○ Special Testing

ENCLOSURE

- ○ Motorized Dampers
- ○ Door Switch for Intrusion Alarm
- ○ Enclosure Ambient Heaters

TANKS

- ○ Overfill Protection Valve
- ○ UL2085 Tank
- ○ ULC S-601 Tank
- ○ Special Fuel Tanks
- ○ Vent Extensions

RATING DEFINITIONS

Standby - Applicable for a varying emergency load for the duration of a utility power outage with no overload capability.

Prime - Applicable for supplying power to a varying load in lieu of utility for an unlimited amount of running time. A 10% overload capacity is available for 1 out of every 12 hours. The Prime Power option is only available on International applications. Power ratings in accordance with ISO 8528-1, Second Edition.

*Consult factory for availability

SD230 | 8.7L | 230 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

GENERAC® | INDUSTRIAL POWER

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 - L (cu. in)	8.7 (530.91)
Bore - mm (in)	117 (4.61)
Stroke - mm (in)	135 (5.31)
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 Capacity - L (qts)	28 (29.57)

Cooling System

Cooling System Type	Closed Recovery
Water Pump Type	Pre-Lubed, Self Sealing
Fan Type	Pusher
Fan Speed (rpm)	2538
Fan Diameter - mm (in)	762 (30.0)
Coolant Heater Wattage	2000
Coolant Heater Standard Voltage	240V

Fuel System

Fuel Type	Ultra Low Sulfur Diesel Fuel
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 - mm (in.)	12.7 (0.5) NPT
Fuel Return Line - mm (in.)	12.7 (0.5) NPT

Engine Electrical System

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

ALTERNATOR SPECIFICATIONS

Standard Model	520 mm
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 Excitation
Bearings	Single Sealed Cartridge
Coupling	Direct, 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	230 kW	Amps: 958
Three-Phase 120/208 VAC @0.8pf	230 kW	Amps: 798
Three-Phase 120/240 VAC @0.8pf	230 kW	Amps: 692
Three-Phase 277/480 VAC @0.8pf	230 kW	Amps: 346
Three-Phase 346/600 VAC @0.8pf	230 kW	Amps: 277

STARTING CAPABILITIES (sKVA)

sKVA vs. Voltage Dip

480 VAC							
Alternator	kW	10%	15%	20%	25%	30%	35%
Standard	250	263	395	527	658	790	922
Upsize 1	300	303	454	605	757	908	1059
Upsize 2	350	383	575	767	958	1150	1342

208/240 VAC							
Alternator	kW	10%	15%	20%	25%	30%	35%
Standard	250	197	296	395	494	593	692
Upsize 1	300	277	341	454	568	681	794
Upsize 2	350	280	410	535	640	770	900

FUEL CONSUMPTION RATES*

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

Total Fuel Pump Flow (Combustion + Return) - gal/hr (l/hr)
26 (98)

Diesel - gal/hr (l/hr)

Percent Load	Standby
25%	5.1 (19.3)
50%	9.6 (36.3)
75%	13.7 (51.9)
100%	17 (64.3)

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

COOLING

		Standby
Coolant Flow per Minute	gal/min (l/min)	63.3 (240)
Coolant System Capacity	gal (l)	12.7 (49.2)
Heat Rejection to Coolant	BTU/hr	626,756
Inlet Air	cfm (m^3/hr)	8872 (251)
Max. Operating Radiator Air Temp	°F (°C)	122 (50)
Max. Operating Ambient Temperature (Before Derate)	°F (°C)	110 (43.3)
Maximum Radiator Backpressure	in H_2O	0.5

COMBUSTION AIR REQUIREMENTS

	Standby
Flow at Rated Power cfm (m^3/min)	660 (18.69)

ENGINE

		Standby
Rated Engine Speed	rpm	1800
Horsepower at Rated kW**	hp	359
Piston Speed	ft/min	1593
BMEP	psi	305

EXHAUST

		Standby
Exhaust Flow (Rated Output)	cfm (m^3/min)	1424 (40.4)
Max. Backpressure (Post Silencer)	in Hg (Kpa)	1.5 (5.1)
Exhaust Temp (Rated Output - Post Silencer)	°F (°C)	955 (513)
Exhaust Outlet Size (Open Set)	mm (in)	101.6 (4)

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

Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions.
Please consult a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528 and DIN6271 standards.

SD230 | 8.7L | 230 kW

INDUSTRIAL DIESEL GENERATOR SET

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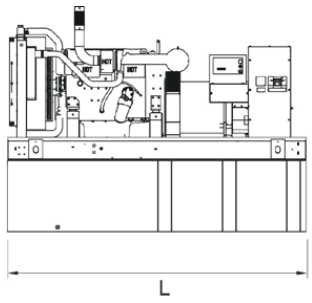
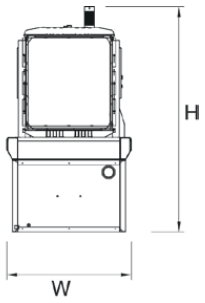
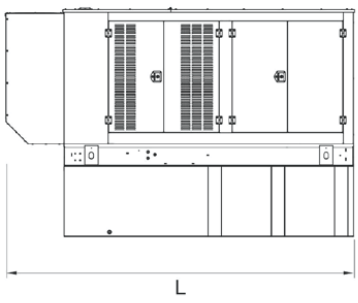
DIMENSIONS AND WEIGHTS*

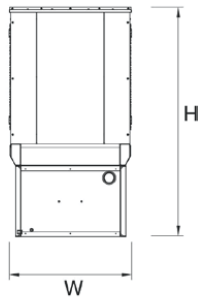




OPEN SET (Includes Exhaust Flex)

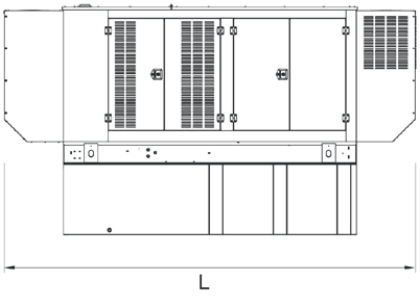
Run Time Hours	Usable Capacity Gal (L)	L x W x H (in (mm)	Weight lbs (kg)
No Tank	-	128 (3251) x 54 (1372) x 58 (1473)	4465 (2025)
10	153 (579.2)	128 (3251) x 54 (1372) x 71 (1803)	5470 (2481)
25	372 (1407)	128 (3251) x 54 (1372) x 83 (2108)	5892 (2673)
40	589 (2227)	128 (3251) x 54 (1372) x 95 (2413)	6309 (2862)
47	693 (2623.3)	136 (3454) x 54 (1372) x 95 (2413)	6060 (2749)
64	946 (3581)	208 (5283) x 54 (1372) x 99 (2515)	7490 (3397)
90	1325 (5015.7)	278 (7061) x 54 (1372) x 99 (2515)	8505 (3858)

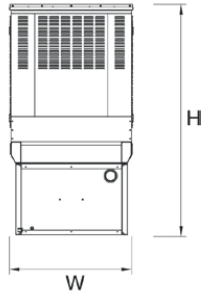




STANDARD ENCLOSURE

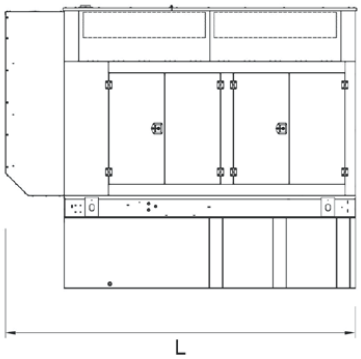
Run Time Hours	Usable Capacity Gal (L)	L x W x H (in (mm)	Weight lbs (kg) Enclosure Only	
			Steel	Aluminum
No Tank	-	155 (3937) x 54 (1372) x 70 (1778)		
10	153 (579.2)	155 (3937) x 54 (1372) x 83 (2108)		
25	372 (1407)	155 (3937) x 54 (1372) x 95 (2413)		
40	589 (2227)	155 (3937) x 54 (1372) x 107 (2718)	941 (427)	474 (215)
47	693 (2623.3)	155 (3937) x 54 (1372) x 107 (2718)		
64	946 (3581)	208 (5283) x 54 (1372) x 111 (2819)		
90	1325 (5015.7)	278 (7061) x 54 (1372) x 111 (2819)		

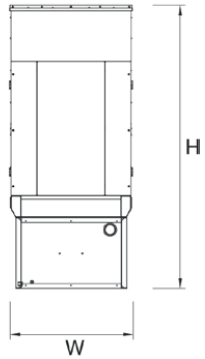




LEVEL 1 ACOUSTIC ENCLOSURE

Run Time Hours	Usable Capacity Gal (L)	L x W x H (in (mm)	Weight lbs (kg) Enclosure Only	
			Steel	Aluminum
No Tank	-	180 (4572) x 54 (1372) x 70 (1778)		
10	153 (579.2)	180 (4572) x 54 (1372) x 83 (2108)		
25	372 (1407)	180 (4572) x 54 (1372) x 95 (2413)		
40	589 (2227)	180 (4572) x 54 (1372) x 107 (2718)	1246 (565)	606 (275)
47	693 (2623.3)	180 (4572) x 54 (1372) x 107 (2718)		
64	946 (3581)	234 (5944) x 54 (1372) x 111 (2819)		
90	1325 (5015.7)	304 (7722) x 54 (1372) x 111 (2819)		





LEVEL 2 ACOUSTIC ENCLOSURE

Run Time Hours	Usable Capacity Gal (L)	L x W x H (in (mm)	Weight lbs (kg) Enclosure Only	
			Steel	Aluminum
No Tank	-	155 (3937) x 54 (1372) x 93 (2362)		
10	153 (579.2)	155 (3937) x 54 (1372) x 106 (2692)		
25	372 (1407)	155 (3937) x 54 (1372) x 118 (2997)		
40	589 (2227)	155 (3937) x 54 (1372) x 130 (3302)	1482 (672)	708 (321)
47	693 (2623.3)	155 (3937) x 54 (1372) x 130 (3302)		
64	946 (3581)	208 (5283) x 54 (1372) x 132 (3353)		
90	1325 (5015.7)	278 (7061) x 54 (1372) x 132 (3353)		

* All measurements are approximate and for estimation purposes only.

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.

Generac Power Systems, Inc. | P.O.Box 8 | Waukesha, WI 53189
P: (262) 544-4811

Part No 0K5098
Rev. C 06/08/15