

**SD1500 | 65.4L | 1500 kW**

**INDUSTRIAL DIESEL GENERATOR SET**

EPA Certified Stationary Emergency

**GENERAC®** | **INDUSTRIAL POWER**

**Standby Power Rating**

1500 kW, 1875 kVA, 60 Hz

**Prime Power Rating\***

1350 kW, 1688 kVA, 60 Hz

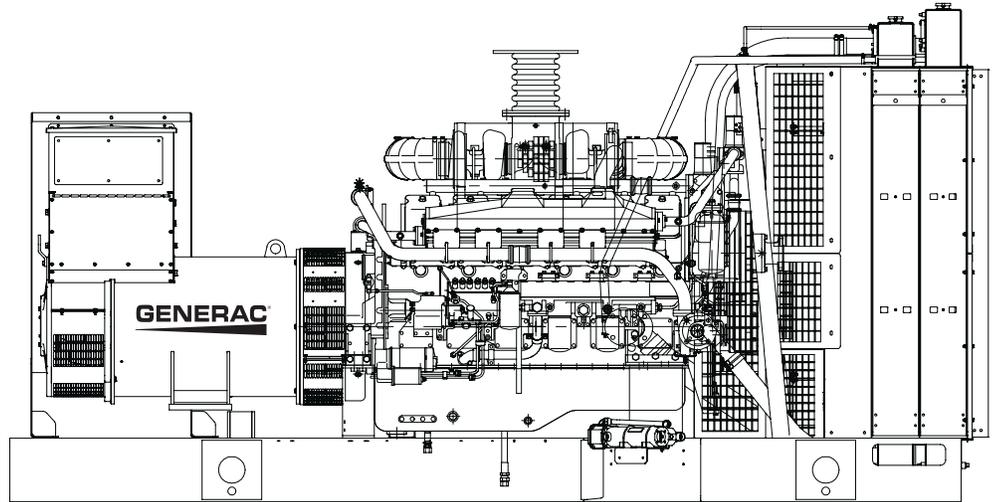


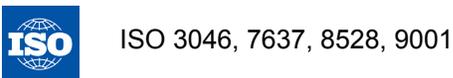
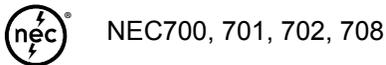
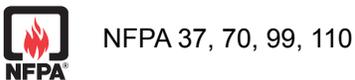
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\*EPA Certified Prime ratings are not available in the US or its Territories

**Codes and Standards**

Generac products are designed to the following standards:



**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.

## STANDARD FEATURES

### ENGINE SYSTEM

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

### Fuel System

- Flexible Fuel Lines
- Primary and Secondary Fuel Filter

### Cooling System

- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Factory-Installed Radiator
- Radiator Drain Extension
- 50/50 Ethylene Glycol Antifreeze

### Electrical System

- Battery Charging Alternator
- Battery Cables
- Battery Tray
- Rubber-Booted Engine Electrical Connections
- Solenoid Activated Starter Motor

### ALTERNATOR SYSTEM

- 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)
- 1 Year Limited Warranty (Prime Rated Units)

### ENCLOSURE (If Selected)

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

### 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



### IntelliGen NT Display

#### Program Functions

- Programmable Crank Limiter
- 7-Day Programmable Exerciser
- Special Applications Programmable Logic Controller
- RS-232/485 Communications
- 3-Phase Sensing Digital Voltage Regulator
- 2-Wire Start Capability
- 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
- 16 Channel Remote Trending
- 0.2msec High Speed Remote Trending
- Alarm Information Automatically Annunciated on the Display

#### Full System Status Display

- Power Output (kW)
- Power Factor
- kW Hours, Total and Last Run
- Real/Reactive/Apparent Power
- All Phase AC Voltage
- All Phase Currents

- Oil Pressure
- Coolant Temperature
- Coolant Level
- Engine Speed
- Battery Voltage
- Frequency

#### Alarms and Warnings

- Oil Pressure
- Coolant Temperature
- Coolant Level
- Engine Overspeed
- Battery Voltage
- Alarms and Warnings Time and Date Stamped
- Snap Shots of Key Operation Parameters During Alarms and Warnings
- Alarms and Warnings Spelled Out (No Alarm Codes)

**CONFIGURABLE OPTIONS****ENGINE SYSTEM**

- 50° Ambient Cooling System
- Heavy Duty Air Cleaner
- Critical and Hospital Grade Silencers
- CCV (Crankcase Ventilation)

**ELECTRICAL SYSTEM**

- 10A UL Battery Charger
- 20 A UL Battery Charger
- Battery Warmer

**ALTERNATOR SYSTEM**

- Alternator Upsizing
- Anti-Condensation Heater

**CIRCUIT BREAKER OPTIONS**

- Main Line Circuit Breaker
- 2nd Main Line Circuit Breaker
- Shunt Trip and Auxiliary Contact
- Electronic Trip Breakers

**GENERATOR SET**

- IntelliMonitor Communications Software (English Only)
- AC Electrical Lighting Package (ELP)
- Spring Isolators (Standard/Seismic)

**ENCLOSURE**

- Weather Protected Enclosure
- Level 1 Sound Attenuation
- Level 2 Sound Attenuation
- Steel Enclosure
- Aluminum Enclosure
- Up to 200 MPH Wind Load Rating\*
- Louvers with Gravity Dampers
- Enclosure Heaters

**WARRANTY**

- 2 Year Extended Limited Warranty
- 5 Year Limited Warranty
- 5 Year Extended Limited Warranty
- 7 Year Extended Limited Warranty
- 10 Year Extended Limited Warranty

**CONTROL SYSTEM**

- 15- LED Remote Annunciator
- Remote Relay Assembly (8 or 16)
- Remote E-Stop - Surface Mount
- Local E-Stop Panel
- Remote Communication - InternetBridge NT
- 10A Run Relay, 12 outputs
- Low Coolant Level Indication
- 90% Alarm High Fuel Program

**TANKS (SIZE ON LAST PAGE)**

- Electric Fuel Level
- Mechanical Fuel Level
- 12 Hour Run Time
- 24 Hour Run Time
- Fuel Line Hose
- Fuel Line Hose and Separator

**ENGINEERED OPTIONS****ENGINE SYSTEM**

- Coolant Heater Ball Valves
- Fluid Containment Pan
- Oil Heater

**ALTERNATOR SYSTEM**

- 3rd Breaker System
- Unit Mounted Load Banks
- Medium Voltage Alternators

**CONTROL SYSTEM**

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

**GENERATOR SET**

- Special Testing
- 12 VDC Enclosure Lighting Kit
- 24VDC/120 VAC Enclosure Lighting Kit

**ENCLOSURE**

- Motorized Dampers
- Intrusion Alert Door Switch

**TANKS**

- Overfill Protection Valve
- UL2085 Tank
- ULC S-601 Tank
- Special Fuel Tanks
- Vent Extensions
- Transfer Pumps and Controllers
- Fuel Tank Heaters

\*Consult factory for availability

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### APPLICATION AND ENGINEERING DATA

#### ENGINE SPECIFICATIONS

##### General

Make	Mitsubishi
EPA Emissions Compliance	Tier 2
EPA Emissions Reference	See Emission Data Sheet
Cylinder #	16
Type	4 Cycle
Displacement - L (cu. in)	65.4 (3,989)
Bore - mm (in)	170 (6.69)
Stroke - mm (in)	180 (7.09)
Compression Ratio	14.5:1
Intake Air Method	Turbocharged/Intercooled
Cylinder Head	4-Valve
Piston Type	Aluminum
Crankshaft Type	Dropped Forged Steel

##### Engine Governing

Governor	Proact2 Isochronous
Frequency Regulation (Steady State)	±0.25%

##### Lubrication System

Oil Pump Type	Gear
Oil Filter Type	Cartridge
Crankcase Capacity - L (qts)	200 (212)

##### Cooling System

Cooling System Type	Unit Mounted Radiator
Water Pump Type	Centrifugal
Fan Type	Pusher
Fan Speed (rpm)	710
Fan Diameter - mm (in)	2,057 (81)

##### Fuel System

Fuel Type	Ultra Low Sulfur Diesel #2
Fuel Specifications	ASTM
Fuel Filtering (microns)	10 (final filters)
Fuel Inject Pump Make	Mechanical
Fuel Pump Type	Engine Driven Gear
Injector Type	Mitsubishi PS8 Type x 2
Engine Type	S16R-Y2PTAW-1
Fuel Supply Line - mm (in.)	19.0 (3/4" NPT)
Fuel Return Line - mm (in.)	19.0 (3/4" NPT)

##### Engine Electrical System

System Voltage	24 VDC
Battery Charger Alternator	Standard
Battery Size	See Battery Index 0161970SBY
Battery Voltage	(2) - 12 VDC
Ground Polarity	Negative

#### ALTERNATOR SPECIFICATIONS

Standard Model	LSA
Poles	4
Field Type	Rotating
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
Load Capacity- Standby	100%
Prototype Short Circuit Test	Yes
Voltage Regulator Type	Analog
Regulation Accuracy (Steady State)	±0.5%

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### OPERATING DATA

#### POWER RATINGS

	Standby	
Three-Phase 277/480 VAC @0.8pf	1,500 kW	Amps: 2,255
Three-Phase 346/600 VAC @0.8pf	1,500 kW	Amps: 1,804

#### STARTING CAPABILITIES (sKVA)

sKVA vs. Voltage Dip

480 VAC

Alternator	kW	10%	15%	20%	25%	30%	35%
Standard	1,500	1,225	1,946	2,757	3,676	4,727	5,939
Upsize 1	1,628	1,316	2,090	2,961	3,949	5,077	6,379

#### FUEL CONSUMPTION RATES\*

Fuel Pump Lift- ft (m)	Diesel - gal/hr (l/hr)	
3 (1)	Percent Load	Standby
Total Fuel Pump Flow (Combustion + Return) - gal/hr (l/hr)	25%	36.5 (138)
	50%	66 (250)
	75%	97.3 (368)
	100%	133 (504)
148 (560)	* Fuel supply installation must accommodate fuel consumption rates at 100% load.	

#### COOLING

Cooling Rating- Jacket Water			Cooling Rating- Aftercooler		
		Standby			Standby
Coolant Flow per Minute	gal/min (l/min)	489 (1,851)	Coolant Flow per Minute	gal/min (l/min)	243 (920)
Coolant System Capacity	gal (l)	100 (389)	Coolant System Capacity	gal (l)	58 (220)
Heat Rejection to Coolant	BTU/min	2,122,320	Heat Rejection to Coolant	BTU/min	2,122,320
Inlet Air- 40°C Cooling Package	cfm (m³/min)	83,500 (2,365)			
Inlet Air- 50°C Cooling Package	cfm (m³/min)	83,500 (2,365)			
Max. Operating Ambient Temp	°F (°C)	122 (50)			
Max Operating Ambient Temperature (before derate)	see Bulletin No. 0199270SSD				
Maximum Radiator Backpressure	in H <sub>2</sub> O	0.5			

Cooling Rating- Fuel Pump		
		Standby
Heat Rejected to Fuel	BTU/min	18,808

#### COMBUSTION AIR REQUIREMENTS

	Standby
Flow at Rated Power cfm (m³/min)	5,932 (168)

#### ENGINE

		Standby
Rated Engine Speed	rpm	1,800
Horsepower at Rated kW**	hp	2,346
Piston Speed	ft(m)/min	2,126 (648)
BMEP	psi	259

#### EXHAUST

		Standby
Exhaust Flow (Rated Output)	cfm (m³/min)	14,665 (415)
Max. Allowable Backpressure	inHg (kPa)	1.7 (5.87)
Exhaust Temp (Rated Output - Post Silencer)	°F (°C)	932 (500)
Exhaust Outlet Size (Open Set)	mm (in)	JIS350A

\*\* 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. Standby - See Bulletin 0187500SSB

Prime - See Bulletin 0187510SSB

**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	-	231 (5,844) x 107 (2,712) x 117 (2,955)	35,078 (15,912)
12	1,525 (5,774)	265 (6,706) x 125 (3,158) x 140 (3,564)	41,778 (18,951)
24	3,050 (11,547)	265 (6,706) x 125 (3,158) x 156 (3,945)	44,178 (20,039)

**STANDARD ENCLOSURE\*\***

Run Time Hours	Usable Capacity Gal (L)	L x W x H in (mm)	Weight lbs (kg)
No Tank	-	265 (6,706) x 120 (3,048) x 189 (4,793)	45,361 (20,576)
12	1,525 (5,774)	270 (6,834) x 122 (3,234) x 194 (4,925)	48,381 (21,946)
24	3,050 (11,547)	270 (6,834) x 122 (3,234) x 209 (5,306)	50,781 (23,034)

**LEVEL 1 ACOUSTIC ENCLOSURE\*\***

Run Time Hours	Usable Capacity Gal (L)	L x W x H in (mm)	Weight lbs (kg)
No Tank	-	351 (8,915) x 120 (3,048) x 189 (4,793)	50,781 (23,034)
12	1,525 (5,774)	351 (8,915) x 130 (3,288) x 191 (4,844)	51,344 (23,290)
24	3,050 (11,547)	351 (8,915) x 130 (3,288) x 210 (5,309)	53,044 (24,061)

**LEVEL 2 ACOUSTIC ENCLOSURE\*\***

Run Time Hours	Usable Capacity Gal (L)	L x W x H in (mm)	Weight lbs (kg)
No Tank	-	426 (10,802) x 269 (6,819) x 192 (4,867)	49,859 (22,616)
12	1,525 (5,774)	426 (10,802) x 269 (6,819) x 191 (4,844)	53,559 (24,294)
24	3,050 (11,547)	426 (10,802) x 269 (6,819) x 201 (5,098)	55,259 (25,066)

\* All measurements are approximate and for estimation purposes only.

\*\* Height includes externally mounted silencer.

<b>YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER</b>

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.