MD1000GEM | 16.0L | 1000 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

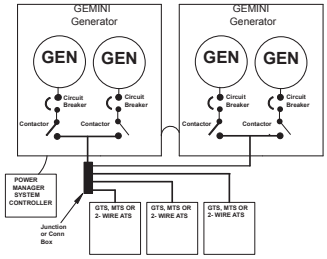
GENERAC | INDUSTRIAL POWER

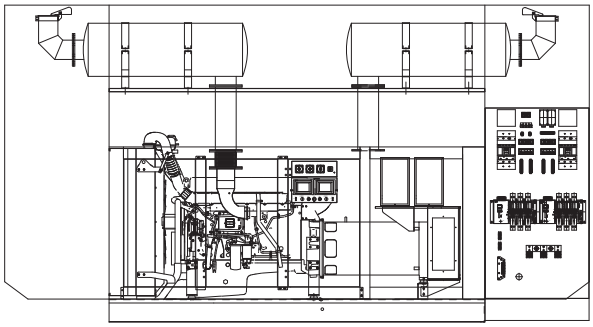
STANDBY POWER RATING

1000 kW, 1250 kVA, 60 Hz

PRIME POWER RATING

900 kW, 1125 kVA, 60 Hz



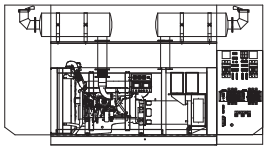


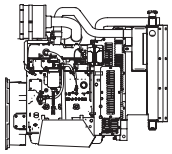
ISO 9001:2008

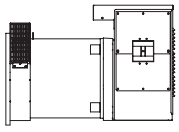
USA ENGINEERED & BUILT*

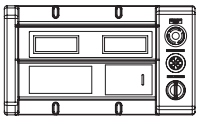
*EPA Certified Prime ratings are not available in the U.S. or its Territories for engine model year 2011 and beyond

Image used for illustration purposes only









features benefits

Generator Set

CONFIGURED FOR PARALLELING	MODULAR PARALLELING SYSTEM
UL2200 TESTED	ENSURES A QUALITY PRODUCT
RHINOCOAT PAINT SYSTEM	IMPROVES RESISTANCE TO ELEMENTS
ACOUSTIC ENCLOSURE STANDARD	PROVIDES A SINGLE SOURCE SOLUTION

Engines

EPA COMPLIANT	ENVIRONMENTALLY FRIENDLY
INDUSTRIAL TESTED, GENERAC APPROVED	ENSURES INDUSTRIAL STANDARDS
POWER-MATCHED OUTPUT	ENGINEERED FOR PERFORMANCE
INDUSTRIAL GRADE	IMPROVES LONGEVITY AND RELIABILITY

Alternators

TWO-THIRDS PITCH	ELIMINATES HARMFUL 3RD HARMONIC
LAYER WOUND ROTOR & STATOR	IMPROVES COOLING
CLASS H MATERIALS	HEAT TOLERANT DESIGN
DIGITAL 3-PHASE VOLTAGE CONTROL	FAST AND ACCURATE RESPONSE

Controls

INTEGRATED PARALLELING	SINGLE CONTROL MODULE
4-20mA VOLTAGE-TO-CURRENT SENSORS	NOISE RESISTANT 24/7 MONITORING
SURFACE-MOUNT TECHNOLOGY	PROVIDES VIBRATION RESISTANCE
ADVANCED DIAGNOSTICS & COMMUNICATIONS	HARDENED RELIABILITY

primary codes and standards

NEMA · c UL us LISTED · NFPA · ASTM INTERNATIONAL · ISO · ICC

MD1000GEM | 16.0L | 1000 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

GENERAC | INDUSTRIAL POWER

APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

General

Make	Generac
EPA Emissions Compliance	Stationary Emergency
EPA Emissions Reference	See Emissions Data Sheet
Cylinder #	(2) 6
Type	In - Line
Displacement - L (cu. in.)	16.12 (983.7)
Bore - mm (in.)	144 (5.67)
Stroke - mm (in.)	165 (6.5)
Compression Ratio	16.5:1
Intake Air Method	Turbocharged/Aftercooled
Cylinder Head Type	One Piece Cast Iron
Piston Type	Aluminum w/ Cooling Cavity, oil cooled
Connecting Rod Type	I-Beam Section

Engine Governing

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

Lubrication System

Oil Pump Type	Gear
Oil Filter Type	Full - Flow Cartridge
Crankcase Capacity - L (gal)	48 (12.7)

Cooling System (each engine)

Cooling System Type	Closed Recovery
Water Pump	Prelubed, Self Sealing
Fan Type	Pusher
Fan Speed (rpm)	1872
Fan Diameter mm (in.)	889 (35)
Coolant Heater Standard Wattage	2x2000W
Coolant Heater Standard Voltage	240VAC

Fuel System (each engine)

Fuel Type	Ultra Low Sulfur Diesel Fuel
Fuel Specifications	ASTM
Fuel Filtering (microns)	10
Fuel Inject Pump Make	Delphi
Fuel Pump Type	Engine Driven Gear
Injector Type	Multi-hole, Nozzle Type
Engine Type	Direct Injection
Fuel Supply Line - mm (in.)	12.7 (½")
Fuel Return Line - mm (in.)	12.7 (½")

Engine Electrical System (each engine)

System Voltage	24 VDC
Battery Charging Alternator	80 Amps
Battery Size (at 0°C)	1155
Battery Group	8D
Battery Voltage	(2) - 12 VDC
Ground Polarity	Negative

ALTERNATOR SPECIFICATIONS

Standard Model	Generac WEG
Poles	4
Field Type	Revolving
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion	< 3%
Telephone Interference Factor (TIF)	< 50
Standard Excitation	Permanent Magnet
Bearings	Single Sealed Cartridge
Coupling	Direct, Flexible Disc
Load Capacity - Standby	100%
Prototype Short Circuit Test	Yes

Voltage Regulator Type	Digital
Number of Sensed Phases	3
Regulation Accuracy (Steady State)	± 0.25%
Paralleling Controls	Standard

CODES AND STANDARDS COMPLIANCE (WHERE APPLICABLE)

NFPA 99
NFPA 110
ISO 8528-5
ISO 1708A.5
ISO 3046
BS5514
SAE J1349
DIN6271
IEEE C62.41 TESTING
NEMA ICS 1
UL2200

PARALLELING CONTROLS

Auto-Synchronization Process
Isochronous Load Sharing
Reverse Power Protection
Maximum Power Protection
Electrically Operated, Mechanically Held Paralleling Switch
Sync Check System
Independent On-Board Paralleling
Optional Programmable Logic Full Auto Back-Up Control (PLS)

Rating Definitions:
Standby – Applicable for a varying emergency load for the duration of a utility power outage with no overload capability. (Max. load factor = 70%)
Prime – Applicable for supplying power to a varying load in lieu of utility for an unlimited amount of running time. (Max. load factor = 80%) A 10% overload capacity is available for 1 out of every 12 hours.

MD1000GEM | 16.0L | 1000 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

GENERAC | INDUSTRIAL POWER

OPERATING DATA (60Hz)

POWER RATINGS (kW)

	STANDBY		PRIME	
Three-Phase 277/480VAC @0.8pf	1000 kW	Amps: 1505	900 kW	Amps: 1355
Three-Phase 346/600VAC @0.8pf	1000 kW	Amps: 1204	900 kW	Amps: 1084

STARTING CAPABILITIES (sKVA)

sKVA vs. Voltage Dip

480VAC

Alternator	kW	10%	15%	20%	25%	30%	35%
Standard	(2) 500	914	1371	1829	2286	2743	3200
Upsize 1	-	-	-	-	-	-	-

FUEL

Fuel Consumption Rates* (includes two engines)

Fuel Pump Lift - mm (in)	STANDBY			PRIME		
	Percent Load	gph	lph	Percent Load	gph	lph
1000 (40)	25%	17.4	65.8	25%	15.4	56.6
	50%	30.6	115.8	50%	26.8	101.4
	75%	45.4	171.8	75%	39.8	150.6
	100%	62.6	237.0	100%	56.2	212.8

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

COOLING

Coolant Capacities - Gal (L)

System	(2) x 15.9 (60.2)
Engine	(2) x 8.78 (33)
Radiator	(2) x 7.1 (26.9)

		STANDBY	PRIME
Coolant Flow per Minute	gpm (lpm)	(2) x 122 (462)	(2) x 122 (462)
Heat Rejection to Coolant	BTU/hr	(2) x 1,153,968	(2) x 1,035,991
Inlet Air	cfm (m3/min)	(2) x 23,308 (660)	(2) x 23,308 (660)
Max. Operating Radiator Air Temp	F° (C°)	122 (50)	122 (50)
Max. Operating Ambient Temperature	F° (C°)	104 (40)	104 (40)
Maximum Radiator Backpressure	in H_2O	0.5	0.5

COMBUSTION AIR REQUIREMENTS

		STANDBY	PRIME
Flow at Rated Power	cfm (m3/min)	(2) x 1617 (45.8)	(2) x 1554 (44.0)

ENGINE

		STANDBY	PRIME
Rated Engine Speed	rpm	1800	1800
Horsepower at Rated kW**	hp	757	681
Piston Speed	ft/min	1950	1950
BMEP	psi	339	302

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

EXHAUST

		STANDBY	PRIME
Exhaust Flow (Rated Output)	cfm (m^3/min)	(2) x 3899 (110.4)	(2) x 3553 (100.6)
Max. Backpressure (Post Silencer)	inHg (Kpa)	1.5 (5.1)	1.5 (5.1)
Exhaust Temp (Rated Output)	°F (°C)	893 (479)	817 (436)
Exhaust Outlet Size (Open Set)		(2) x 8" Diameter Exhaust Stack	

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.

STANDARD FEATURES AND OPTIONS

GENERATOR SET

●	Genset Vibration Isolation	Std
○	IBC Seismic Certified/Seismic Rated Vibration Isolators	Opt
○	Extended warranty	Opt
○	Gen-Link Communications Software	Opt
●	Steel Enclosure	Std
○	Aluminum Enclosure	Opt
○	Enclosure Lighting Kits	Opt

ENGINE SYSTEM

	General	
●	Oil Drain Extensions	Std
○	Oil Heaters	Opt
●	Air cleaners	Std
●	Fan guards	Std
●	Radiator duct adapters	Std
●	Critical Exhaust Silencers	Std
●	Stainless steel flexible exhaust connections	Std
	Fuel System	
●	Fuel lockoff solenoids	Std
●	Secondary fuel filters	Std
○	Primary fuel filters	Opt
○	Single Wall Tank (Export Only)	-
○	UL 142 Fuel Tank	Opt
	Cooling System	
○	208VAC Coolant Heaters	Opt
●	240VAC Coolant Heaters	Std
○	Other Coolant Heaters	-
●	Closed Coolant Recovery Systems	Std
●	UV/Ozone resistant hoses	Std
●	Factory-Installed Radiators	Std
●	Radiator Drain Extensions	Std
	Engine Electrical System	
●	Battery charging alternators	Std
●	Battery cables	Std
○	Battery trays	Opt
○	Battery boxs	Opt
○	Battery heaters	Opt
●	Solenoid activated starter motors	Std
○	10A UL float/equalize battery chargers	Opt
●	Rubber-booted engine electrical connections	Std

ALTERNATOR SYSTEM

●	UL2200 GENprotect™	Std
●	Main Line Circuit Breakers (Output connections on paralleling switch)	Std
○	Anti-Condensation Heaters	Opt
●	Tropical coating	Std
●	Permanent Magnet Excitation	Std

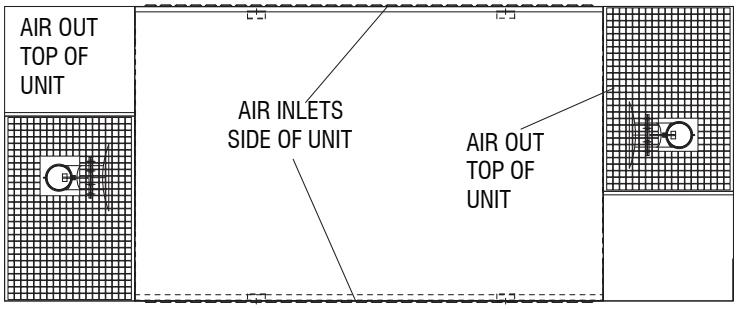
CONTROL SYSTEM

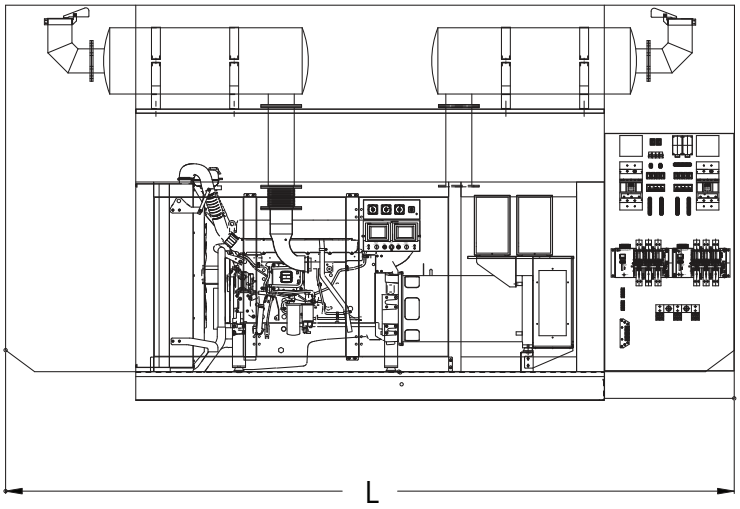
	Control Panel	
○	Digital H Control Panel - Dual 4x20 Display	na
○	Digital G-100 Control Panel - Touchscreen	na
●	Digital G-200 Paralleling Control Panel - Touchscreen	Std
●	Programmable Crank Limiter	Std
○	21-Light Remote Annunciator	Opt
○	Remote Relay Panel (8 or 16)	Opt
●	7-Day Programmable Exerciser	Std
●	Special Applications Programmable PLC	Std
●	RS-232	Std
●	RS-485	Std
●	All-Phase Sensing DVR	Std
●	Full System Status	Std
●	Utility Monitoring (Req. H-Transfer Switch)	Std
●	2-Wire Start Compatible	Std
●	Power Output (kW)	Std
●	Power Factor	Std
●	Reactive Power	Std
●	All phase AC Voltage	Std
●	All phase Currents	Std
●	Oil Pressure	Std
●	Coolant Temperature	Std
●	Coolant Level	Std
○	Oil Temperature	Opt
●	Fuel Level	Std
●	Engine Speed	Std
●	Battery Voltage	Std
●	Frequency	Std
●	Date/Time Fault History (Event Log)	Std
○	Low-Speed Exercise	-
●	Isochronous Governor Control	Std
●	-40deg C - 70deg C Operation	Std
●	Waterproof Plug-In Connectors	Std
●	Audible Alarms and Shutdowns	Std
●	Not in Auto (Flashing Light)	Std
●	Auto/Off/Manual Switch	Std
●	E-Stop (Red Mushroom-Type)	Std
○	Remote E-Stop (Break Glass-Type, Surface Mount)	Opt
○	Remote E-Stop (Red Mushroom-Type, Surface Mount)	Opt
○	Remote E-Stop (Red Mushroom-Type, Flush Mount)	Opt
●	NFPA 110 Level I and II (Programmable)	Std
●	Remote Communication - RS232	Std
○	Remote Communication - Modem	Opt
○	Remote Communication - Ethernet	Opt
○	PLS Full Auto Back-Up for PM-SC	Opt
	Alarms (Programmable Tolerances, Pre-Alarms and Shutdowns)	
○	Low Fuel	Opt
●	Oil Pressure (Pre-programmed Low Pressure Shutdown)	Std
●	Coolant Temperature (Pre-programmed High Temp Shutdown)	Std
●	Coolant Level (Pre-programmed Low Level Shutdown)	Std
●	Oil Temperature	Std
●	Engine Speed (Pre-programmed Overspeed Shutdown)	Std
●	Voltage (Pre-programmed Overvoltage Shutdown)	Std
●	Battery Voltage	Std

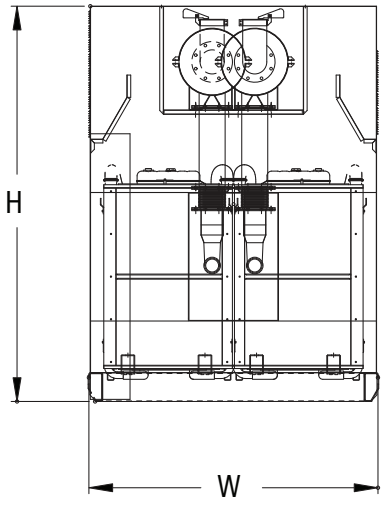
ENCLOSURE AND TANK CONFIGURATIONS

LEVEL 1 ACOUSTIC ENCLOSURE

RUN TIME HOURS	USABLE CAPACITY (GAL)	L	W	H	WT
NO TANK	-	258	96	131	21000
14	853	258	96	151	25130
25	1578	258	96	160	25630
37	2310	258	96	170	26370







Tank Options

○	MDEQ	OPT
○	Florida DERM/DEP	OPT
○	Chicago Fire Code	OPT
○	IFC Certification	CALL
○	ULC	CALL

Other Custom Options Available from your Generac Industrial Power Dealer

*All measurements are approximate and for estimation purposes only. Weights are without fuel in tank.

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.

Generac Power Systems, Inc. | P.O. Box 8 | Waukesha, WI 53187
P: (262) 544-4811

Part No 0173810SBY
Rev. E 06/08/15