

# MD600

PARALLELING UNIT

## Industrial Diesel Generator Set

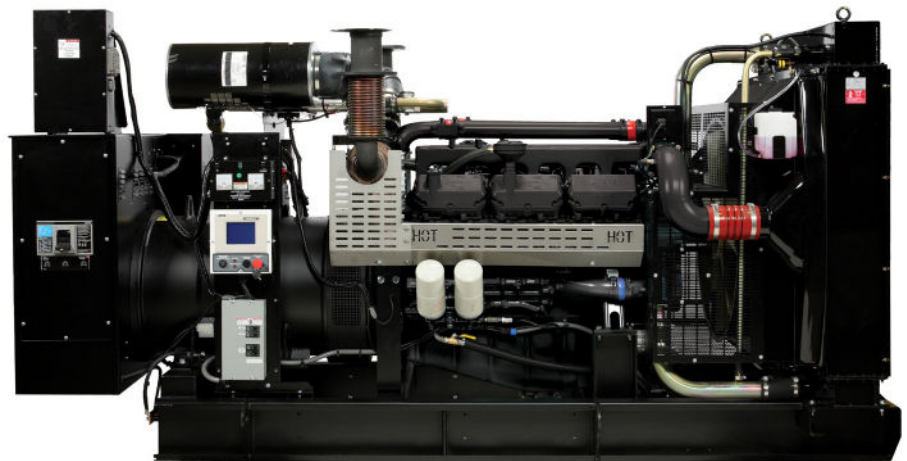
EPA Certified Stationary Emergency

600 kW Diesel

1 of 5

Standby Power Rating  
750kVA 600KW 60 Hz

Prime Power Rating\*  
684kVA 547KW 60 Hz

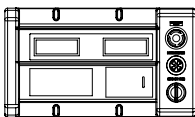
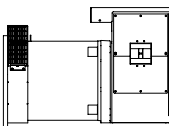
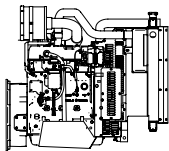
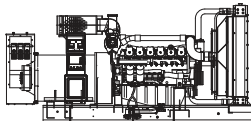


Generator image used for illustration purposes only

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

### features

### benefits



#### Generator Set

- PROTOTYPE & TORSIONALLY TESTED
- UL2200 TESTED
- RHINOCOAT PAINT SYSTEM
- WIDE RANGE OF ENCLOSURES AND TANKS
- ▶ PROVIDES A PROVEN UNIT
- ▶ ENSURES A QUALITY PRODUCT
- ▶ IMPROVES RESISTANCE TO ELEMENTS
- ▶ PROVIDES A SINGLE SOURCE SOLUTION

#### Engine

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

#### Alternator

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

#### Controls

- ENCAPSULATED BOARD W/ SEALED HARNESS
- 4-20mA VOLTAGE-TO-CURRENT SENSORS
- SURFACE-MOUNT TECHNOLOGY
- ADVANCED DIAGNOSTICS & COMMUNICATIONS
- ▶ EASY, AFFORDABLE REPLACEMENT
- ▶ NOISE RESISTANT 24/7 MONITORING
- ▶ PROVIDES VIBRATION RESISTANCE
- ▶ HARDENED RELIABILITY

### primary codes and standards



## MD600

## application and engineering data

### ENGINE SPECIFICATIONS

#### General

Make	Generac
EPA Emissions Compliance	Stationary Emergency
EPA Emissions Reference	See Emissions Data Sheet
Cylinder #	12
Type	V-12
Displacement - L	22
Bore - mm (in.)	128 (5.04)
Stroke - mm (in.)	142 (5.6)
Compression Ratio	15.0:1
Intake Air Method	Turbocharged/Aftercooled
Cylinder Head Type	3 Cylinder Bank Heads
Piston Type	Open Chamber/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 (qts)	40 (10.5)

#### Cooling System

Cooling System Type	Closed Recovery
Water Pump Flow	Centrifugal Type, Belt-Driven
Fan Type	Pusher
Fan Speed (rpm)	2063
Fan Diameter mm (in.)	915 (36)
Coolant Heater Standard Wattage	3000W
Coolant Heater Standard Voltage	240VAC

#### Fuel System

Fuel Type	Ultra Low Sulfur Diesel Fuel
Fuel Specifications	ASTM
Fuel Filtering (microns)	10
Fuel Inject Pump Make	Bosch P Type x 1
Fuel Pump Type	Engine Driven Gear
Injector Type	Bosch Multi-Hole
Engine Type	Direct Injection
Fuel Supply Line - mm (in.)	12.7 (½")
Fuel Return Line - mm (in.)	(5/16" FNPT)

#### Engine Electrical System

System Voltage	24 VDC
Battery Charging Alternator	45 Amps at 24V
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	Self-Ventilated, Drip-Proof
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	All
Regulation Accuracy (Steady State)	± 0.25%

### CODES AND STANDARDS COMPLIANCE (WHERE APPLICABLE)

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

# MD600

# operating data (60Hz)

## POWER RATINGS (kW)

	STANDBY		PRIME	
Three-Phase 277/480VAC @0.8pf	600 kW	Amps: 903	450 kW	Amps: 823
Three-Phase 346/600VAC @0.8pf	600 kW	Amps: 723	450 kW	Amps: 659

## STARTING CAPABILITIES (sKVA)

		sKVA vs. Voltage Dip								sKVA vs. Voltage Dip					
		480VAC								208/240VAC					
Alternator	kW	10%	15%	20%	25%	30%	35%	Alternator	kW	10%	15%	20%	25%	30%	35%
Standard	600	743	1114	1486	1857	2229	2600	Standard	-	-	-	-	-	-	-
Upsize 1	832	757	1136	1514	1893	2271	2650	Upsize 1	-	-	-	-	-	-	-
Upsize 2	-	-	-	-	-	-	-	Upsize 2	-	-	-	-	-	-	-

## FUEL

		Fuel Consumption Rates*					
		STANDBY			PRIME		
Fuel Pump Lift - mm (in)		Percent Load	gph	lph	Percent Load	gph	lph
1000 (40)		25%	14.4	54.5	25%	14.4	53.4
		50%	23.4	88.7	50%	21.1	79.1
		75%	36.6	138.6	75%	32.3	122.4
		100%	46.2	175.1	100%	42.1	159.6

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

## COOLING

		STANDBY		PRIME	
<b>Coolant Capacities - Gal (L)</b>					
System	25.9 (98)	Coolant Flow per Minute	gpm (lpm)	134.2 (508)	134.2 (508)
Engine	6.1 (23)	Heat Rejection to Coolant	BTU/hr	1,703,302	1,552,143
Radiator	19.8 (75)	Inlet Air	cfm (m3/min)	23,500 (665)	23,500 (665)
		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 <sub>2</sub> O	1.5	1.5

## COMBUSTION AIR REQUIREMENTS

		STANDBY	PRIME
Flow at Rated Power	cfm (m3/min)	1959 (55.5)	1716 (48.6)

## ENGINE

		STANDBY	PRIME
Rated Engine Speed	rpm	1800	1800
Horsepower at Rated kW**	hp	954	859
Piston Speed	ft/min	1677	1677
BMEP	psi	313	274

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

## EXHAUST

		STANDBY	PRIME
Exhaust Flow (Rated Output)	cfm (m <sup>3</sup> /min)	6419 (182)	5615 (159)
Max. Backpressure (Post Silencer)	inHg (Kpa)	1.5 (5.1)	1.5 (5.1)
Exhaust Temp (Rated Output)	°F (°C)	1300 (704)	1141 (616)
Exhaust Outlet Size (Open Set)	2X8" ANSI or 1X10" Single (Open Set)		

## MD600

## standard features and options

### GENERATOR SET

<input checked="" type="radio"/>	Genset Vibration Isolation	Std
<input type="radio"/>	IBC Seismic Certified/Seismic Rated Vibration Isolators	Opt
<input type="radio"/>	Extended warranty	Opt
<input type="radio"/>	Gen-Link Communications Software	Opt
<input type="radio"/>	Steel Enclosure	Opt
<input type="radio"/>	Aluminum Enclosure	Opt
<input type="radio"/>	Enclosure Lighting Kits	Opt

### ENGINE SYSTEM

General		
<input checked="" type="radio"/>	Oil Drain Extension	Std
<input type="radio"/>	Oil Make-Up System	Opt
<input type="radio"/>	Oil Heater	Opt
<input checked="" type="radio"/>	Air cleaner	Std
<input checked="" type="radio"/>	Fan guard	Std
<input checked="" type="radio"/>	Radiator duct adapter	Std
<input type="radio"/>	Industrial Exhaust Silencer	Opt
<input type="radio"/>	Critical Exhaust Silencer	Opt
<input type="radio"/>	Hospital Grade Silencer	Opt

#### Fuel System

<input checked="" type="radio"/>	Fuel lockoff solenoid	Std
<input checked="" type="radio"/>	Secondary fuel filter	Std
<input checked="" type="radio"/>	Stainless steel flexible exhaust connection	Std
<input type="radio"/>	Flexible fuel lines	Opt
<input type="radio"/>	Primary fuel filter	Opt
<input type="radio"/>	Single Wall Tank (Export Only)	-
<input type="radio"/>	UL 142 Fuel Tank	Opt

#### Cooling System

<input type="radio"/>	120VAC Coolant Heater	Opt
<input type="radio"/>	208VAC Coolant Heater	Opt
<input checked="" type="radio"/>	240VAC Coolant Heater	Std
<input type="radio"/>	Other Coolant Heater	-
<input checked="" type="radio"/>	Closed Coolant Recovery System	Std
<input checked="" type="radio"/>	UV/Ozone resistant hoses	Std
<input checked="" type="radio"/>	Factory-Installed Radiator	Std
<input checked="" type="radio"/>	Radiator Drain Extension	Std

#### Engine Electrical System

<input checked="" type="radio"/>	Battery charging alternator	Std
<input checked="" type="radio"/>	Battery cables	Std
<input checked="" type="radio"/>	Battery tray	Std
<input type="radio"/>	Battery box	Opt
<input type="radio"/>	Battery heater	Opt
<input checked="" type="radio"/>	Solenoid activated starter motor	Std
<input type="radio"/>	10A UL float/equalize battery charger	Opt
<input checked="" type="radio"/>	Rubber-booted engine electrical connections	Std

### ALTERNATOR SYSTEM

<input checked="" type="radio"/>	UL2200 GENprotect™	Std
<input checked="" type="radio"/>	Main Line Circuit Breaker (Output connections on paralleling switch)	Std
<input type="radio"/>	Alternator Upsizing	Opt
<input type="radio"/>	Anti-Condensation Heater	Opt
<input type="radio"/>	Tropical coating	Opt
<input checked="" type="radio"/>	Permanent Magnet Generator	Std

### CONTROL SYSTEM

#### Control Panel

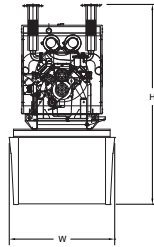
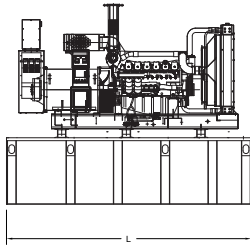
<input type="radio"/>	Digital H Control Panel - Dual 4x20 Display	na
<input type="radio"/>	Digital G-100 Control Panel - Touchscreen	na
<input checked="" type="radio"/>	Digital G-200 Paralleling Control Panel - Touchscreen	Std
<input checked="" type="radio"/>	Programmable Crank Limiter	Std
<input type="radio"/>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

#### Alarms (Programmable Tolerances, Pre-Alarms and Shutdowns)

<input type="radio"/>	Low Fuel	Opt
<input checked="" type="radio"/>	Oil Pressure (Pre-programmed Low Pressure Shutdown)	Std
<input checked="" type="radio"/>	Coolant Temperature (Pre-programmed High Temp Shutdown)	Std
<input checked="" type="radio"/>	Coolant Level (Pre-programmed Low Level Shutdown)	Std
<input checked="" type="radio"/>	Oil Temperature	Std
<input checked="" type="radio"/>	Engine Speed (Pre-programmed Overspeed Shutdown)	Std
<input checked="" type="radio"/>	Voltage (Pre-programmed Overvoltage Shutdown)	Std
<input checked="" type="radio"/>	Battery Voltage	Std

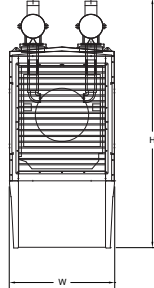
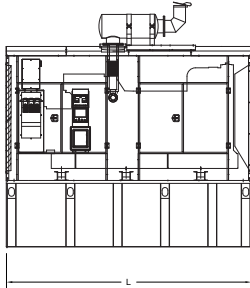
# MD600

## dimensions, weights and sound levels



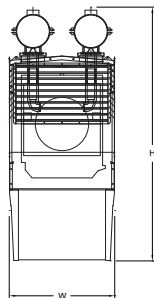
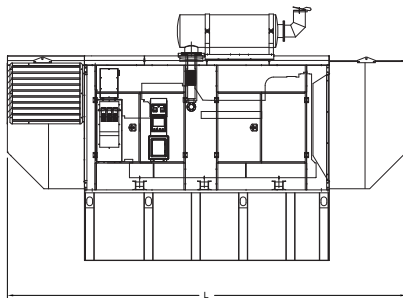
### OPEN SET

RUN TIME HOURS	USABLE CAPACITY (GAL)	L	W	H	WT	dBA*
NO TANK	-	141	57	84	9902	94
7	313	152	63	98	11564	
10	469	152	63	104	11694	
15	685	152	63	110	12452	
20	936	185	63	113	12572	
29	1347	185	63	120	13672	



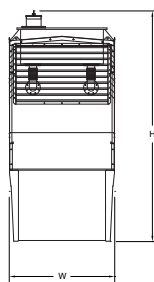
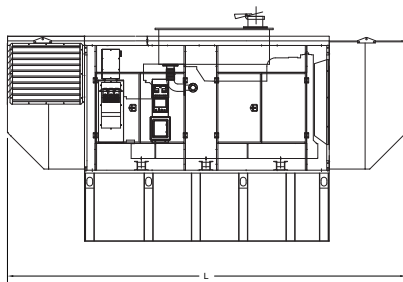
### STANDARD ENCLOSURE

RUN TIME HOURS	USABLE CAPACITY (GAL)	L	W	H	WT	dBA*
NO TANK	-	152	63	118	12190	90
7	313	152	63	135	14010	
10	469	152	63	141	14048	
15	685	152	63	147	14392	
20	936	185	63	150	14990	
29	1347	185	63	157	15268	



### LEVEL 1 ACOUSTIC ENCLOSURE

RUN TIME HOURS	USABLE CAPACITY (GAL)	L	W	H	WT	dBA*
NO TANK	-	229	63	118	11993	86
7	313	229	63	135	13655	
10	469	229	63	141	13785	
15	685	229	63	147	14543	
20	936	229	63	150	14663	
29	1347	229	63	157	15763	



### LEVEL 1 ACOUSTIC ENCLOSURE WITH NESTED SILENCER

RUN TIME HOURS	USABLE CAPACITY (GAL)	L	W	H	WT	dBA*
NO TANK	-	270	71	104	15263	75
7	313	270	71	120	16925	
10	469	270	71	125	17055	
15	685	270	71	133	17813	
20	936	270	71	133	17933	
29	1347	270	71	143	19033	

\*All measurements are approximate and for estimation purposes only. Weights are without fuel in tank. Sound levels measured at 23ft (7m) and does not account for ambient site conditions.

#### Tank Options

<input type="radio"/> MDEQ	OPT
<input type="radio"/> Florida DERM/DEP	OPT
<input type="radio"/> Chicago Fire Code	OPT
<input type="radio"/> IFC Certification	CALL
<input type="radio"/> ULC	CALL

Other Custom Options Available from your Generac Industrial Power Dealer

#### 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.