

### EPA Certified / Stationary Emergency

OUTPUT POWER OPTIONS					Natural Gas				LP Vapor		sKVA
					125°C STANDBY		105°C CONTINUOUS		125°C STANDBY		
Make	Voltage	Alternator	Phase	Hertz	kW/kVA	Amps	kW/kVA	Amps	kW/kVA	Amps	30% Voltage Dip
Marathon	600	433PSL6248	3	60	400/500	482	360/450	434	295/369	355	1380
	277/480	433CSL6220	3	60	400/500	602	360/450	542	295/369	444	1469
	120/208	433CSL6220	3	60	400/500	1390	360/450	1251	295/369	1025	1103
	120/240	433CSL6220	3	60	400/500	1204	360/450	1084	295/369	888	1103
Stamford	600	HCI534C17	3	60	400/500	482	360/450	434	295/396	355	1360
	277/480	HCI534C311	3	60	400/500	602	360/450	542	295/369	444	1480
	120/208	HCI534C311	3	60	400/500	1390	360/450	1251	295/369	1025	1145
	120/240	HCI534C311	3	60	400/500	1204	360/450	1084	295/369	888	1145
Stamford	120/240	HCI534C311	1	60	210/210	875	190/190	792	210/210	875	765
	277/480	HCI534D311	3	60	400/500	602	360/450	542	300/375	452	1750
	120/208	HCI534D311	3	60	400/500	1390	360/450	1251	300/375	1042	1390
	120/240	HCI534D311	3	60	400/500	1204	360/450	1084	300/375	903	1390
	120/240	HCI534D311	1	60	230/230	958	208/208	867	230/230	958	930



**Engine Data**

Manufacturer	Doosan	
Model	21.9L	
Aspiration	Turbocharged, Air Cooled	
Arrangement	V-Type, 4-Cycle	
Firing Order	1-12-5-8-3-10-6-7-2-11-4-9	
Displacement: L (in. <sup>3</sup> )	21.9 (1338)	
Bore: mm (in.)	128 (5.04)	
Stroke: mm (in.)	142 (5.59)	
Compression Ratio	10.5:1	
BMEP: psi (kPa)	Natural Gas	201 (1385.9)
	LP Vapor	155 (1068.7)
Gross Horsepower: Natural Gas	612	
	LP Vapor	471
Rated RPM	1800	
Governor	Isochronous	
Speed Regulation	±0.5%	

**Engine Liquid Capacity**

Oil system: qt. (L)	38.5 (36.5)
Cooling System Capacity: gal (L)	64 (291)

**Engine Electrical**

Electric Volts: DC	24
Cold Cranking Amps	1100
Battery(s) Required	2

**Fuel System**

Fuel Type	Natural Gas, LP Vapor or Dual Fuel	
Fuel Supply Inlet:		
	Natural Gas	3" NPT
	LP Vapor	3" NPT
Fuel Supply Pressure: in. H <sub>2</sub> O (kPa)		
	Natural Gas	7-11 (1.74-2.74)
	LP Vapor	7-11 (1.74-2.74)

**Filters and Quantity**

Air Cleaner Quantity	1
Oil Filter(s) Quantity	1

**Air Requirements**

Air Filter(s) Type	Dry
Air Flow: CFM (m <sup>3</sup> /min)	40,000 (1133)
Max Air Intake Restriction: in. H <sub>2</sub> O (kPa)	
Clean	5.00 (1.24)
Dirty	15.00 (3.74)
Combustion Air: CFM (m <sup>3</sup> /min)	841 (24.6)

**Exhaust System**

Gas Flow: CFM (m <sup>3</sup> /min)	2995 (84.8)
Max Exhaust Back Pressure: in. H <sub>2</sub> O (kPa)	40.9 (10.2)

**Sound Level**

Open Unit: dBA 3.2 ft (1M)	93.4
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**Cooling System**

Heat Rejection per CAC: kW (BTUM)	26.7 (1520)
Heat Rejection to Coolant: kW (BTUM)	453 (25,760)
Coolant Flow: gal/min (L/min)	174 (660)

**Fuel Consumption Natural Gas - 130°C**

At 100% of Power Rating: CFH (m <sup>3</sup> /hr)	4231 (119.8)
At 75% of Power Rating: CFH (m <sup>3</sup> /hr)	3298 (93.4)
At 50% of Power Rating: CFH (m <sup>3</sup> /hr)	2317 (65.6)
At 25% of Power Rating: CFH (m <sup>3</sup> /hr)	1413 (40.0)

**Fuel Consumption Natural Gas - 105°C**

At 100% of Power Rating: CFH (m <sup>3</sup> /hr)	3856 (109.2)
At 75% of Power Rating: CFH (m <sup>3</sup> /hr)	3005 (85.1)
At 50% of Power Rating: CFH (m <sup>3</sup> /hr)	2137 (60.5)
At 25% of Power Rating: CFH (m <sup>3</sup> /hr)	1331 (37.7)

**Fuel Consumption LP Vapor - 130°C**

At 100% of Power Rating: CFH (m <sup>3</sup> /hr)	1409 (39.9)
At 75% of Power Rating: CFH (m <sup>3</sup> /hr)	1201 (34.0)
At 50% of Power Rating: CFH (m <sup>3</sup> /hr)	809 (22.9)
At 25% of Power Rating: CFH (m <sup>3</sup> /hr)	512 (14.5)

**GENERAL GUIDELINES FOR DERATION:** Altitude: Derate 0.5% per 100m (328 ft.) Elevation above 1000m (3279 ft.) Temperature: Derate 1.0% per 10°C (18°F) temperature above 25°C (77°F)

**RATINGS:** All three-phase units are rated at 0.8 power factor. All single-phase units are rated at 1.0 power factor.

**125° RATINGS:** 125° apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-3046/1, BS 5514, AS 2789, and DIN 6271.

**105° RATINGS:** 105° ratings apply to installations where utility power is unavailable or unreliable. At varying load the number of generator set operating hours is unlimited. A 10% overload capacity is available for one hour in twelve. Ratings are in accordance with ISO-8528/1, overload power in accordance with ISO-3046/1, BS5514, AS2789, and DIN 6271. For limited running time and base load ratings consult the factory. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.

## Alternator Data

Manufacturer	Marathon	
Type	PMG	
Insulation NEMA Rise/Temp	NEMA N/125°C	
Hertz	60	
Phase	3	
RPM	1800	
Leads	12	
Amortisseur Windings	Full	
CFM Cooling Required	880	
Voltage Regulator	DVR2000E+	PM500
Sensing	Three Phase	Three Phase
Voltage Regulation	0.25%	0.25%

## Features

- NEMA MG1-32, BS5000, and IEC 34-1 compliant; CE & CSA Certified and UL Listed
- Self-ventilated and drip proof construction
- Two-thirds pitch stator and skewed rotor
- Wet wound, epoxied field windings
- Designed to withstand overspeeds of up to 125%
- Hybrid analog/digital voltage regulator
- Under frequency protection
- Under frequency indication light
- Less than one cycle response time
- Over excitation protection
- Over excitation indication light
- Easy access front-panel adjustments
- Over voltage protection shutdown
- Analog input for paralleling

## Alternator Data

Manufacturer	Stamford	
Type	PMG	
Insulation NEMA Rise/Temp	NEMA H/125°C	
Hertz	60	
Phase	3	
RPM	1800	
Leads	12	
Amortisseur Windings	Full	
CFM Cooling Required	2780	
Voltage Regulator	MX341	MX321
Sensing	Single Phase	Three Phase
Voltage Regulation	1.0%	0.50%

## Features

- BS EN 60034, BS5000, VDE 0530, NEMA MG1-32, IEC34, CSA C22.2-100, and AS1359 complaint
- IP23 enclosure
- Dynamically balanced to exceed BS6861:Part 1 Grade 2.5 vibration standard
- Quality assurance to BS EN ISO 9001
- Self-ventilated and
- Drip proof construction
- Two-thirds pitch stator and skewed rotor
- Heavy duty bearings
- Fully guarded
- Overexcitation protection
- Under frequency protection
- Analog input
- Overvoltage protection
- Paralleling compatible



## DGC2020 Digital Controller

- Integrated engine-genset control, protection, and metering
- Microprocessor allows for exact measurement, setpoint adjustment, and timing functions
- Front panel 3 position controls and indicators enable quick and simple operation
- Emergency stop push button and an Alarm Horn with silence button
- A wide temperature-range liquid crystal display (LCD) with backlighting
- SAE J1939 Engine ECU communications
- Remote RS-485 communications for Optional RDP-110 Remote Annunciator
- 4 programmable contact inputs and 10 contact outputs (2 ADC rated)
- Modbus Communications with RS-485, Battery Backup for Real Time Clock, UL recognized, CSA certified, CE approved, HALT (Highly Accelerated Life Tests) tested
- IP 54 Front Panel rating with integrated gasket and NFPA 110 Level 1 Compatible.
- Manual Override Keyswitch



## Analog Controller with Emergency Bypass Key Switch

- Automatic CANBUS Engine Control
- Oil Pressure, Water Temperature, Battery Voltage and RPM Gauges
- Automatic Gauge Zeroing on Shutdown
- AC Voltage, Frequency, Percent of Load, and Run-Time Metering
- 3-Position Auto-Off-Manual Control Switch
- LED Status Lights: Low Oil Pressure, High Temperature, Overcrank, Overspeed, & Engine Start



**Standard Features:**

**Warranty**

2 Year Standard
5 Year Comprehensive

- Heavy Duty Steel Base
- Vibration Isolators
- Oil Drain Valve with Extension
- Battery Rack & Cables
- High Ambient Unit Mounted Radiator
- Battery Charging Alternator
- Factory Powder Coating
- Factory Test
- Owner's Manual

**Controller Options**

DGC-2020HD Controller
Fiber Optic Ethernet (DGC-2020HD)
RS-232 Port & Generator Protection (DGC-2020)
Flush or Surface Mount Remote Annunciator
Remote Mount Break Glass E-Stop Switch

**Miscellaneous Options:**

- Battery Charger
- Coolant Drain Kit
- Block Heater
- Line Circuit Breaker
- Pad Type Battery Heater
- Battery Heater Blanket w/Thermostat
- Oil Pan Heater
- Generator Strip Heater

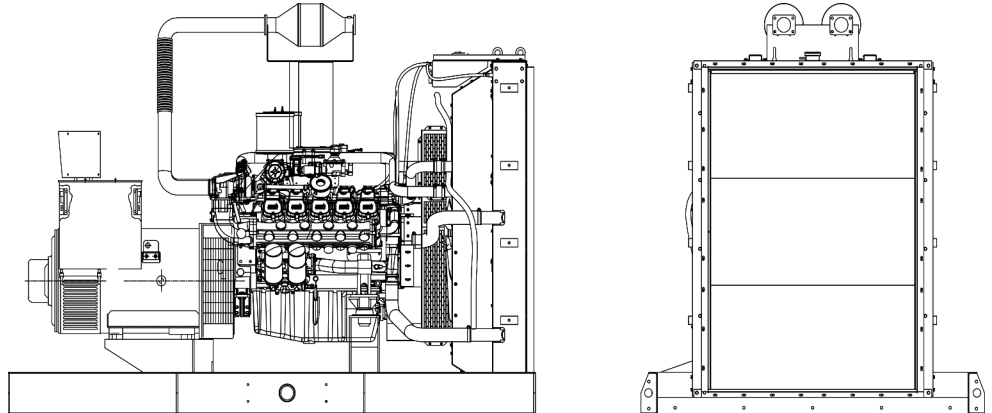
**Open Unit**

**Options:**

- Radiator Duct Flange
- Flex Exhaust
- Critical Silencer

OVERALL SIZE: 140"L x 90"W x 95"H  
 Approximate Weight: 10,400 lbs.

*Note: Dimensions and weights reflect standard open unit with no options and are subject to change.*



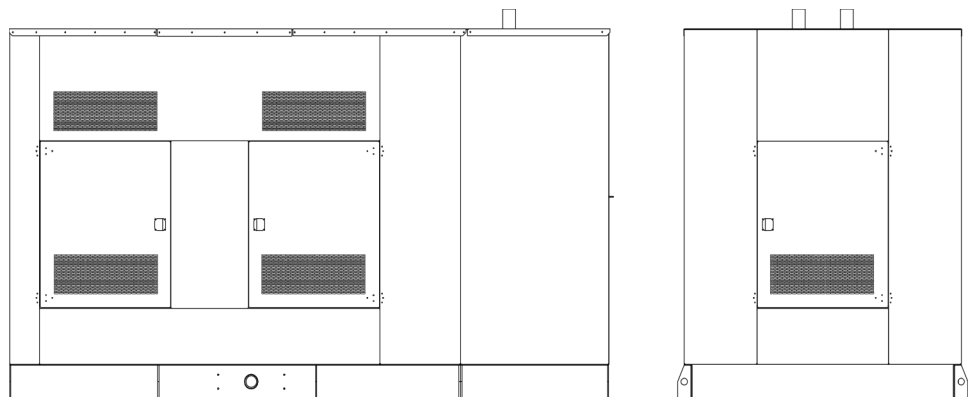
**Standard Enclosed Unit**

**Options:**

- Sound Attenuated Enclosure
- Load Center, Lights & GFI Receptacle

OVERALL SIZE: 186"L x 90"W x 106"H  
 Approximate Weight: 13,100 lbs.

*Note: Dimensions and weights reflect standard enclosed unit with no options and are subject to change.*



**Note: The above drawings are provided for reference only and should not be used for planning installation. Contact your local distributor for more information.**