

Model	GM160-W		NA			
Frequency/Speed - Voltage	50HZ/1500 RPM-230/400V		60HZ/1800 RPM-277/480V		60HZ/1800 RPM-230/400V	
Prime Power	160 KVA	128 KW	NA	NA	NA	NA
Standby Power	176 KVA	140.8 KW	NA	NA	NA	NA



Image for illustration purposes only.

### Features

<b>Engine</b>	MAXXFORCE, 7.2P-160, complying to the norms: ISO 3046, ISO 8528 BS 5514 and DIN 6271
<b>Alternator</b>	WEG, GTA251AIHE, complying to the norms IEC 60034 - NBR 5117 - NEMA MG1 - VDE530 - ISO8528 - CSA
<b>Control Panel</b>	Deep sea, M-DCM-317B, Made in UK, complying to the norms BS EN 61000, BS EN 60950, BS EN 60068
<b>Base Frame</b>	Black steel with Anti-vibration pads, Built in fuel tank
<b>Sound Proof Canopy</b>	Modular SPC, Powder Coated, Extremely Durable, Designed to Reduce Sound Level with Maximum Service Accessibility and Minimum Foot Prints
<b>Worldwide Support</b>	Mets Energy Products are distributed through its PowerMets International Network For more information kindly check our website <a href="http://www.metsenergy.com">www.metsenergy.com</a>

### Rating Definitions and Conditions

<b>Prime Rating</b>	The power available for an unlimited hour usage with an average load factor of 80% of the published prime power over each 24 hours period. A 10 % overload is available for 1Hr every 12 hours.
<b>Standby Rating</b>	The power limited to 500 hours annual usage with an average load factor of 80% of the published standby power rating over each 24-hour period. Up to 300 hours of annual usage may be run continuously. No overload is permitted on standby power.
<b>KVA Rating @ 0.8 P.F</b>	

### Engine MAXXFORCE, 7.2P-160, 4 Stroke Cycle, Diesel


<b>Structure</b>	<b>Number of Cylinders</b>	6	
	<b>Engine Build</b>	In line	
	<b>Bore</b>	105 mm	
	<b>Stroke</b>	137 mm	
	<b>Displacement</b>	7.12 L	
	<b>Compression Ratio</b>	16.8 /1	
	<b>Aspiration</b>	Turbocharged	
	<b>Cooling</b>	Aftercooled	
<b>Fuel</b>	<b>Fuel Tank</b>	<b>1500 rpm</b>	<b>1800 rpm</b>
		Enclosure : Built in fuel tank 447 L for 13 hours operation @ full load	TBA
	<b>Fuel System</b>	Direct injection	
	<b>Fuel Recommended</b>	N°2 Diesel	
	<b>Fuel System Make (ECM)</b>	-	
		<b>1500 rpm</b>	<b>1800 rpm</b>
	<b>Delivery Flow Rate (l/hr)</b>	TBA	NA
	<b>Fuel Consumption</b>		
	<b>100% Load (g/kWh-L/hr)</b>	197 ( 34.15 )	NA
	<b>75% Load (g/kWh-L/hr)</b>	197 ( 25.61 )	NA
<b>50% Load (g/kWh-L/hr)</b>	207 ( 17.94 )	NA	
<b>Cooling system</b>	<b>Engine Coolant Capacity</b>	25L	
	<b>Air Flow-Radiator</b>	5570 l/s	NA
	radiator with 50 degree ambient Cooling Package & Air Cleaner Kit Thermostatically-controlled system		
<b>Air Inlet</b>	<b>Air Intake Engine</b> (Clean Filter/Dirty)	230 / 600 mm H2O	
<b>Exhaust System</b>	<b>Exhaust Gas Temperature (Prime)</b>	600 °C	NA
	<b>Exhaust Gas Flow (Prime)</b>	664 kg/h	NA
	<b>Maximum Exhaust System Back Pressure</b>	75 mmHg	NA
	<b>Muffler</b>	residential (20→25 dB)	industrial(15→25 dB)
	Stainless Steel exhaust flex-fittings		
<b>DC System-Starting/Charging</b>	<b>Cranking Battery Voltage</b>	24 V	
	<b>Battery Charging Alternator</b>	TBA	
	Dc Voltage Monitoring via control panel		
<b>Heat Rejection(prime)</b>	<b>Radiated Heat to Ambient (Prime)</b>	14.38 kW	NA
	<b>Heat Rejection to Coolant (Prime)</b>	70.98 kW	NA
	<b>Heat Rejection to Exhaust (Prime)</b>	110.58 kW	NA
	<b>Heat Rejection to intercooler (prime)</b>	22.49 kW	NA
<b>Lube System</b>	<b>Lubricating System Oil Capacity</b>	19.8 L	



**Alternator Weg, GTA251AIHE**

<b>Structure</b>	<b>Insulation System</b>	Class H	
	<b>Winding Pitch</b>	2/3 to minimize harmonics effects	
	<b>Number of Poles</b>	4	
	<b>Number of Bearings</b>	Single bearing	
	<b>Winding Leads</b>	12	
	<b>Power Factor</b>	0.8	
	<b>Over Speed Capability (% of</b>	2250 Rpm (125%)	
	<b>Wave Form Distortion</b>	THD(Total Harmonic Distortion)@ No load < 5.0%	
	<b>Telephone Interference</b>	TIF < 3%	
	<b>IP Rating (Protection)</b>	IP21	
<b>AVR</b>	Excitation with auxiliary coil		
	Synchronous, 3 phase, Brushless & Self ventilated		
		<b>1500 rpm</b>	<b>1800 rpm</b>
<b>Power Switching</b>	3-P Circuit Breaker, MCCB	250A	NA
<b>Temperature</b>	<b>Temperature Rise</b>	125/40 °C	
<b>Control &amp; Voltage Regulator</b>	<b>Control System (Standard)</b>	Excitation with auxiliary coil	
	<b>Voltage Regulator (AVR)</b>	GRT7-TH4E(5A E9)	
	<b>% Of Voltage Regulation</b>	± 0.5 %	
<b>Motor Starting Capacity@30%</b>	if voltage 230/400V	TBA	
<b>Voltage Dip</b>	if voltage 277/480V	TBA	

**Standard Controller, M-DCM-317**

<b>Control</b>	<ul style="list-style-type: none"> <li>Auto/Start/Stop Control</li> <li>Emergency Stop Pushbutton/ Alarm Acknowledge</li> <li>Engine Cool Down Timer</li> <li>Warm-up Timer</li> <li>Load Switching Timer</li> <li>Engine Cycle Crank</li> </ul>	
<b>Indications</b>	<ul style="list-style-type: none"> <li>Operating Hours</li> <li>3 Phase Generator Voltage Sensing &amp; Monitoring</li> <li>Current Protection &amp; Monitoring</li> <li>Power Measurement (kW, kVA, kVA<sub>r</sub>, kWh, kVAh, kVA<sub>r</sub>h, pf)</li> <li>Frequency Monitoring (Hz)</li> <li>Oil Pressure/Coolant Temperature/Fuel Level Monitoring</li> <li>Battery Voltage Monitoring (DC)</li> <li>Alarm Acknowledge</li> </ul>	
<b>Warning &amp; Shutdown Alarms</b>	<ul style="list-style-type: none"> <li>Generator Over/Under Voltage &amp; Frequency</li> <li>Crank Disconnect (Failure to Start)</li> <li>Under/Over Speed</li> <li>Over Current</li> <li>Low oil pressure</li> <li>High Water Temperature</li> <li>Low Fuel Level</li> <li>Low Water Level</li> </ul>	
<b>Features</b>	<ul style="list-style-type: none"> <li>IP 65 (if ordered with gasket)</li> <li>Basic Scheduler</li> <li>8-35 VDC Supply</li> <li>Digital Inputs(4)- Outputs(4 MPU/ 6 CAN)</li> <li>Event Log (5 shutdowns)</li> </ul>	

**Optional Accessories**

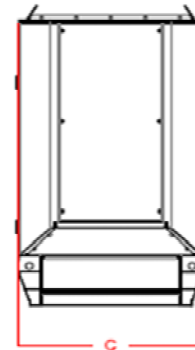
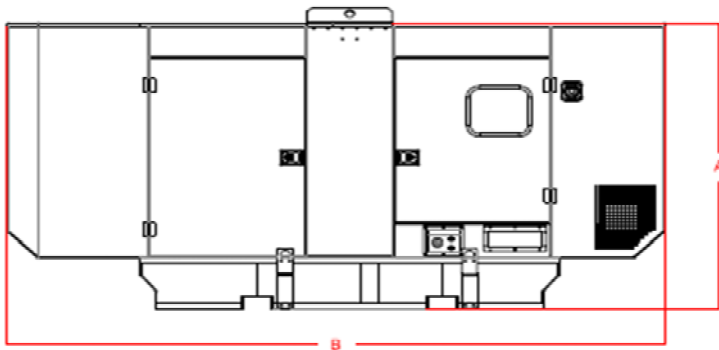
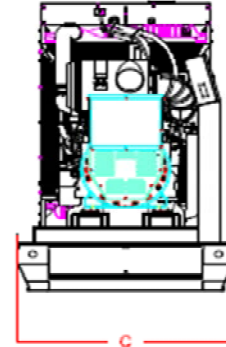
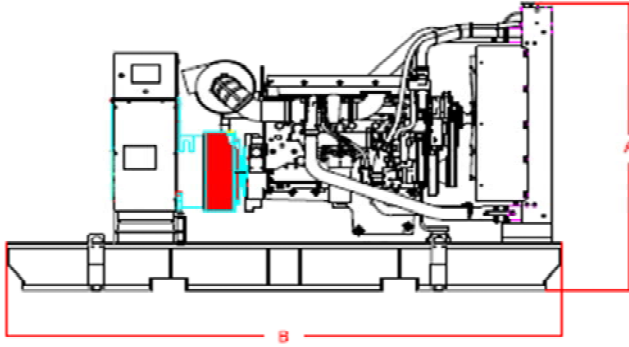
<b>Alternator</b>	<ul style="list-style-type: none"> <li>AVR (3 phase Sensing)</li> <li>Reactive Droop</li> <li>Winding Temperature Detectors</li> <li>Anti- Condensation Heaters</li> <li>Excitation with auxiliary exciter (PMG)</li> </ul>
<b>Power Switching</b>	<ul style="list-style-type: none"> <li>4-P Circuit Breaker</li> <li>Special Brands (ABB- MG- Siemens...)</li> <li>Motorized Operation</li> <li>Shunt Trip</li> <li>Under Voltage Trip UVT</li> <li>Residual Current Protection</li> <li>Ground Fault Protection</li> <li>Earthing Kit</li> <li>Surge Arrestor</li> </ul>

**Optional Accessories** (continues)

<b>Engine</b>	<b>Fuel</b>	Micro-Diesel Filter for Micro-Particles Filtration
		Automatic Fuel Refilling System
		Fuel Water Separation <b>(2000/40)</b>
		Mechanical Fuel Level Kit
		Oversize Fuel Tank Upon Custom Requirements
		Fuel Tanks-Pipes Heater
	<b>Air Inlet</b>	Sy-clone Air Cleaner Installed @ Air Intake System
	<b>Exhaust</b>	Muffler: Critical (25→30 dB) Hospital (35→40 dB)
		Elbow, Flanges, Expanders & Y Adaptors
	<b>Cooling / Heating</b>	Radiator with 35 °C or 60 °C Ambient Capability
Jacket Water Heater		
<b>Lube</b>	Manual Sump Drain Pump	
	Semi-Rotator Hand Pump	
<b>DC System - Starting/Charging</b>	Mains Battery Charger 24 V DC-5A	
	Battery Charger 10A-20A on Request	
	Automatic Battery Charger on Request	
	Battery Disconnect Switch	
	DC/AC Current Monitoring (Ammeter)	
<b>Control Panel</b>	Oversize Battery	
	DSE 7310/7320/7410/7420-More Inputs & Outputs-Advanced Communications Features;	
	DSE 8610/8710/8810- Load Share Module;	
	Digital & Analogues Inputs Module DSE 2130 (for 7000 Series & Above);	
	Analogue Inputs advanced Module DSE 2131-2133(for 7410 &Above);	
	Digital relay Outputs Module DSE 2157 (for 7000 Series &Above);	
	Analogue Outputs Module DSE 2152 (for 7410 & Above);	
	Local & Remote enunciator Module DSE 2548 (for 7000 Series & Above);	
	Display Modules DSE 2510/2520 (with 7310-7320);	
	Remote Monitoring via: Web Interface (All Series), GSM (for 7000 Series & Above), RS485	
	Dry Contacts Alarm Indication for Customer Use	
	Audible Alarm (Option for 6010/20; Standard for 7000 Series & Above);	
Voltage Adjust Potentiometer;		
Speed Adjust Potentiometer;		

### Dimensions & Weights

	Length (mm)	Width (mm)	Height (mm) "A"	Weight Dry
Open set (NB)	2720	1200	1730	1480
SPC Type S	4280	1210	2136	2051



Drawings for illustration purposes only.

[WWW.METSENERGY.com](http://WWW.METSENERGY.com)