



**METS ENERGY** S A L

Model	NA		MP2-150@6-Li			
Frequency/Speed - Voltage	50HZ/1500 RPM- 230/400V		60HZ/1800 RPM- 230/400V		60HZ/1800 RPM- 277/480V	
Prime Power	NA	NA	135 KVA	108 KW	150 KVA	120 KW
Standby Power	NA	NA	148.5 KVA	118.8 KW	165 KVA	132 KW



Image for illustration purposes only.

### Features

<b>Engine</b>	Perkins ,1106A-E70TG1 , Made in UK, in accordance to ISO3046 ,ISO8528,DIN6271
<b>Alternator</b>	Linz, Pro 22ME/4 , Made in Italy, complying to the following norms: EN60034-1/ UL1004B/ CAN/ CSA,ISO8538, EN55011
<b>Control Panel</b>	Deep sea, M-DCM-317B ,Made in UK, complying to the norms: comply 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>

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Engine Perkins, 1106A-E70TG1, 4 Stroke Cycle, Diesel			
Structure	Number of Cylinders	6	
	Engine Build	In line	
	Bore	105 mm	
	Stroke	135 mm	
	Displacement	7.01 L	
	Compression Ratio	18.2:1	
	Aspiration	Turbocharged	
	Cooling	Water	
Fuel	Fuel Tank	1500 rpm Built in fuel tank	1800 rpm
		TBA for	
		TBAhours	TBA
		operation @ full load	
	Fuel System	Direct injection	
	Fuel Recommended	N°2 Diesel	
	Fuel System Make (ECM)	-	
		1500 rpm	1800 rpm
	Delivery Flow Rate (l/hr)	NA	TBA
	Fuel Consumption		
100% Load (g/kWh-L/hr)	NA	TBA	
75% Load (g/kWh-L/hr)	NA	TBA	
50% Load (g/kWh-L/hr)	NA	TBA	
Cooling system	Engine Coolant Capacity	21L	
	Air Flow-Radiator	NA	4271.7 l/s
		radiator with 50 degree ambient capability Cooling Package & Air Cleaner Kit Thermostatically-controlled system	
Air Inlet	Air Intake Engine(Clean Filter/Dirty)	3/ 5 KPa	
Exhaust System	Exhaust Gas Temperature (Prime)	NA	526°C
	Exhaust Gas Flow (Prime)	NA	453.3 l/s
	Maximum Exhaust System Back Pressure	NA	6 kPa
	Muffler	residential (20→25 dB)	industrial(15→25 dB)
DC System-Starting/Charging	Cranking Battery Voltage	12 V	
	Battery Charging Alternator	65 A	
		Dc Voltage Monitoring via control panel	
Heat Rejection(Prime)	Radiated Heat to Ambient (Prime)	NA	TBA
	Heat Rejection to Coolant (Prime)	NA	TBA
	Heat Rejection to Exhaust (Prime)	NA	TBA
	Heat Rejection to intercooler (prime)	NA	TBA
Lube System	Lubricating System Oil Capacity	16.5 L	
Governor	Mechanical		

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**Alternator Linz, Pro 22ME/4**

<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 (150%)	
	<b>Wave Form Distortion</b>	3 % @ full Load , 3% @ no Load	
	<b>Telephone Interference</b>	THF< 2%	
	<b>IP Rating (Protection)</b>	IP23(other Protection on request)	
<b>AVR</b>	HVR11 (1-phase sensing)/ option HVR30 for 3-phase sensing )		
	Synchronous, 3 phase, Brushless & Self ventilated		
		<b>1500 rpm</b>	<b>1800 rpm</b>
<b>Power Switching</b>	3-P Circuit Breaker, MCCB	NA	225A
<b>Temperature</b>	<b>Temperature Rise</b>	125/40 °C	
<b>Control &amp; Voltage Regulator</b>	<b>Control System (Standard)</b>	Self excited	
	<b>Voltage Regulator (AVR)</b>	HVR11 (1-phase sensing)/ option HVR30 for 3-phase sensing	
	<b>% Of Voltage Regulation</b>	± 1.0 %	
<b>Motor Starting Capacity@30%</b>	if voltage 230/400V	TBA	
<b>Voltage Dip</b>	if voltage 277/480V	TBA	

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

<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>

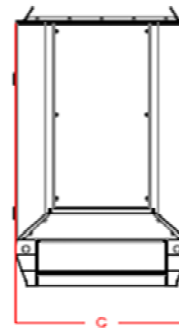
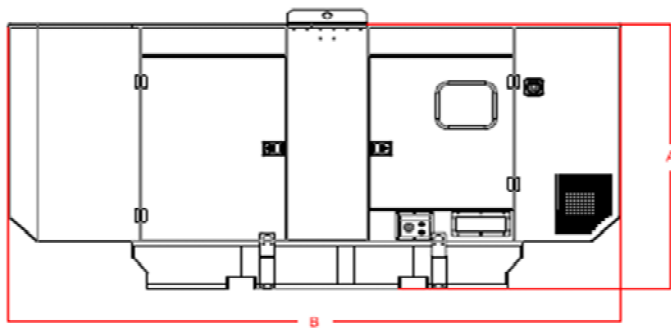
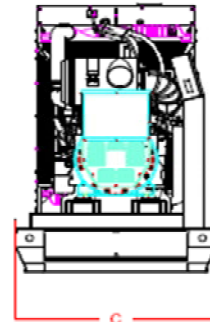
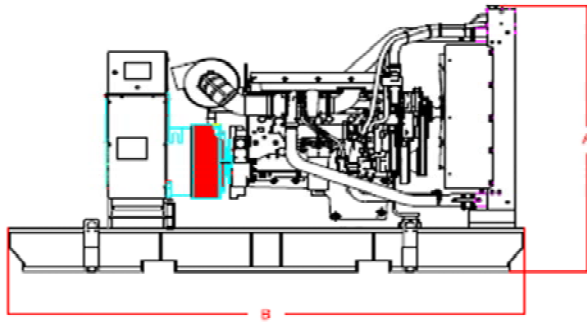


**Optional Accessories**<sup>(continues)</sup>

	<ul style="list-style-type: none"> <li>Micro-Diesel Filter for Micro-Particles Filtration</li> <li>Automatic Fuel Refilling System</li> <li>Fuel Water Separator <b>(2000/5)</b></li> <li>Mechanical Fuel Level Kit</li> <li>Oversize Fuel Tank Upon Custom Requirements</li> <li>Fuel Tanks-Pipes Heater</li> </ul>	
<b>Engine</b>	<b>Air Inlet</b>	Sy-klone 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/Changing</b>	Mains Battery Charger 24 V DC-5A Battery Charger 10A-20A on Request Automatic Battery Charger on Request Battery Disconnecter Switch DC/AC Current Monitoring (Ammeter) Oversize Battery
	<b>Control Panel</b>	<ul style="list-style-type: none"> <li>DSE 7310/7320/7410/7420-More Inputs &amp; Outputs-Advanced Communications Features;</li> <li>DSE 8610/8710/8810- Load Share Module;</li> <li>Digital &amp; Analogues Inputs Module DSE 2130 (for 7000 Series &amp; Above);</li> <li>Analogue Inputs advanced Module DSE 2131-2133(for 7410 &amp;Above);</li> <li>Digital relay Outputs Module DSE 2157 (for 7000 Series &amp;Above);</li> <li>Analogue Outputs Module DSE 2152 (for 7410 &amp; Above);</li> <li>Local &amp; Remote enunciator Module DSE 2548 (for 7000 Series &amp; Above);</li> <li>Display Modules DSE 2510/2520 (with 7310-7320);</li> <li>Remote Monitoring via: Web Interface (All Series), GSM (for 7000 Series &amp; Above), RS485 (for 7000</li> <li>Dry Contacts Alarm Indication for Customer Use</li> <li>Audible Alarm (Option for 6010/20; Standard for 7000 Series &amp; Above);</li> <li>Voltage Adjust Potentiometer;</li> <li>Speed Adjust Potentiometer;</li> </ul>

### Dimensions & Weights

	Length (mm)	Width (mm)	Height (mm)	Weight Dry
<b>Open set (NB)</b>	2520	1100	1590	1408
<b>SPC Type S</b>	3604	1100	1877	1970



Drawings for illustration purposes only.

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