



**METS ENERGY** S.A.L

Model	MP2000U-L		NA			
Frequency/Speed - Voltage	50HZ/1500 RPM-	230/400V	60HZ/1800 RPM- 230/400V		60HZ/1800 RPM- 277/480V	
Prime Power	2000 KVA	1600 KW	NA	NA	NA	NA
Standby Power	2200 KVA	1760 KW	NA	NA	NA	NA



Image for illustration purposes only.

### Features

<b>Engine</b>	Perkins ,4016-61TRG2 , Made in UK, in accordance to ISO3046 ,ISO8528,DIN6271
<b>Alternator</b>	LeRoySomer ,LSA51.2 M6 , Made in France, complying to the norms: IEC 60034, NEMA MG 1.22, ISO 8528/3, CSA, UL 1446, UL 1004B
<b>Control Panel</b>	Deap sea, M-DCM-417(7320) ,Made in UK, complying to the norms: BS EN60034/ BS 5000/ VDE 0530/ NEMA MG 1-32/ IEC 34/ CSA C22.2-100/ AS 1359
<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, 4016-61TRG2, 4 Stroke Cycle, Diesel**

<b>Structure</b>	<b>Number of Cylinders</b>	16		
	<b>Engine Build</b>	60 ° V		
	<b>Bore</b>	160 mm		
	<b>Stroke</b>	190 mm		
	<b>Displacement</b>	61.123 L		
	<b>Compression Ratio</b>	13 /1		
	<b>Aspiration</b>	Turbocharged		
	<b>Cooling</b>	A /W		
		<b>1500 rpm</b>	<b>1800 rpm</b>	
	<b>Fuel Tank</b>			
		NA	NA	
<b>Fuel</b>	<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>			
	<b>Fuel Consumption</b>			
	<b>100% Load (g/kWh-L/hr)</b>	205(421)		NA
	<b>75% Load (g/kWh-L/hr)</b>	206(337)		NA
<b>50% Load (g/kWh-L/hr)</b>	210 (216)		NA	
	<b>Engine Coolant Capacity</b>		TBA	
<b>Cooling system</b>	<b>Air Flow-Radiator</b>	TBA	NA	
	radiator with 50 degree ambient capability			
	Cooling Package & Air Cleaner Kit			
	Thermostatically-controlled system			
<b>Air Inlet</b>	<b>Air Intake Engine (Clean Filter/Dirty)</b>	1.2 / 3.7 kPa		
	<b>Exhaust Gas Temperature (Prime)</b>	457 °C	NA	
	<b>Exhaust Gas Flow (Prime)</b>	8166.6 l/s	NA	
<b>Exhaust System</b>	<b>Maximum Exhaust System Back Pressure</b>	4 kPa	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>	2 * 24V		
	<b>Battery Charging Alternator</b>	40 A		
	Dc Voltage Monitoring via control panel			
<b>Heat Rejection(prime)</b>	<b>Radiated Heat to Ambient (Prime)</b>	130 kW	NA	
	<b>Heat Rejection to Coolant (Prime)</b>	670 kW	NA	
	<b>Heat Rejection to Exhaust (Prime)</b>	1240 kW	NA	
	<b>Heat Rejection to intercooler (prime)</b>	606 kW	NA	
<b>Lube System</b>	<b>Lubricating System Oil Capacity</b>	TBA		
<b>Governor</b>	Electronic			

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**Alternator, LSA51.2 M6**

<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 Rated)</b>	2250 Rpm (150%)	
	<b>Wave Form Distortion</b>	no load < 4 % - on load < 4%	
	<b>Telephone Interference</b>	TIF< 50	
	<b>IP Rating (Protection)</b>	IP23	
	<b>AVR</b>	A R E P or PMG	
		Synchronous, 3 phase, Brushless & Self ventilated	
		<b>1500 rpm</b>	<b>1800 rpm</b>
<b>Power Switching</b>	3-P Circuit Breaker, acb	3200A	NA
<b>Temperature</b>	<b>Temperature Rise</b>	125/40 °C	
<b>Control &amp; Voltage Regulator</b>	<b>Control System (Standard)</b>	A R E P or PMG	
	<b>Voltage Regulator (AVR)</b>	R 448	
	<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-417**

<b>Control</b>	<ul style="list-style-type: none"> <li>Fuel tank monitoring</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>	
<b>Optional Accessories</b>		
<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>	



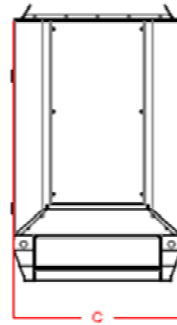
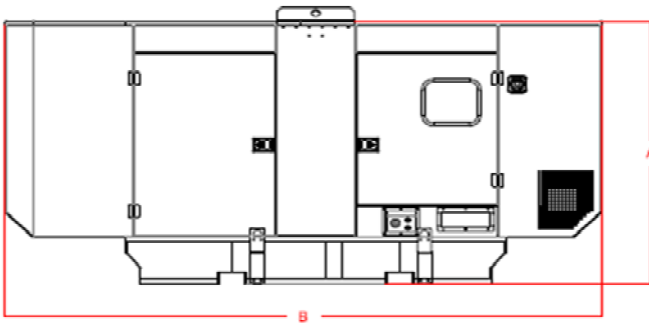
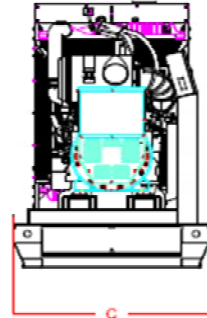
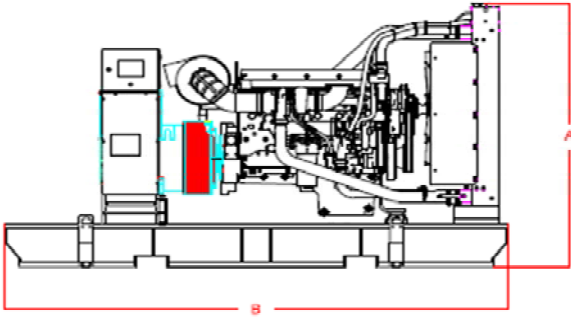
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**Optional Accessories** <sup>(continues)</sup>

		Micro-Diesel Filter for Micro-Particles Filtration Automatic Fuel Refilling System Fuel Water Separato <b>(2000/40)</b> Mechanical Fuel Level Kit Oversize Fuel Tank Upon Custom Requirements Fuel Tanks-Pipes Heater Optional Built in fuel tank 180 L operation full load (Height will be increased by 100 mm and weight by 20 kg)
<b>Engine</b>	<b>Fuel</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 Disconnect Switch DC/AC Current Monitoring (Ammeter) Oversize Battery
<b>Control Panel</b>	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 (for 7000 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)	"C"	Height (mm)	Weight Dry
<b>Open set (NB)</b>	TBA	TBA		TBA	TBA
<b>SPC Type S</b>	TBA	TBA		TBA	TBA



Drawings for illustration purposes only.

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