



METS ENERGY S A L

| Model | MP9-L | | MP11@6-L | | | |
|---------------------------|----------------------------|---------|-----------------------------|---------|-----------------------------|---------|
| Frequency/Speed - Voltage | 50HZ/1500 RPM- 230/400V | | 60HZ/1800 RPM- 230V/400V | | 60HZ/1800 RPM- 277V/480V | |
| Prime Power | 9 KVA | 7.2 KW | 10.5 KVA | 8.4 KW | 11 KVA | 8.8 KW |
| Standby Power | 9.9 KVA | 7.92 KW | 11.55 KVA | 9.24 KW | 12.1 KVA | 9.68 KW |



Image for illustration purposes only.

Features

| | |
|---------------------------|--|
| Engine | Perkins , 403-11G1 , Made in UK , in accordance to ISO3046 ,ISO8528,DIN6271 |
| Alternator | LeRoySomer ,TAL040B , Made in France, complying to the norms: IEC 60034, NEMA MG 1.22, ISO 8528/3, CSA, UL 1446, UL 1004B |
| Control Panel | Deep sea, M-DCM-317 ,Made in UK, complying to the norms: comply to the norms BS EN 61000, BS EN 60950, BS EN 60068 |
| Base Frame | Black steel with Anti-vibration pads, Built in fuel tank |
| Sound Proof Canopy | Modular SPC, Powder Coated, Extremely Durable, Designed to Reduce Sound Level with Maximum Service Accessibility and Minimum Foot Prints |
| Worldwide Support | Mets Energy Products are distributed through its PowerMets International Network For more information kindly check our website www.metsenergy.com |

Rating Definitions and Conditions

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|-----------------------|--|
| Prime Rating | 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. |
| Standby Rating | 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. |

Due to continuous product development, we reserve the right to change specifications at any time without prior notice.

Rev0_MP9-L/MP11@6-L_150217

Engine Perkins, 403-11G1, 4 Stroke Cycle, Diesel

| | | | |
|------------------------------------|---|---|--|
| Structure | Number of Cylinders | 3 | |
| | Engine Build | In line | |
| | Bore | 77 mm | |
| | Stroke | 81 mm | |
| | Displacement | 1.131 L | |
| | Compression Ratio | 23/1 | |
| | Aspiration | Natural | |
| | Cooling | Water cooled | |
| Fuel | Fuel Tank | 1500 RPM Built in fuel tank 27 L for 9 hours operation @ full load | 1800 RPM Built in fuel tank 27 L for 8.5 hours 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) | | |
| | Fuel Consumption | | |
| | 100% Load (g/kWh-L/hr) | 248 (3) | 248 (3.1) |
| | 75% Load (g/kWh-L/hr) | 257 (2.3) | 257 (2.4) |
| | 50% Load (g/kWh-L/hr) | 280 (1.7) | 280 (1.8) |
| Cooling system | Engine Coolant Capacity | 5.2L | |
| | Air Flow-Radiator | TBA | TBA |
| | | radiator with 50 degree ambient Cooling Package & Air Cleaner Kit Thermostatically-controlled | |
| Air Inlet | Air Intake Engine (Clean Filter/Dirty) | TBA | |
| Exhaust System | Exhaust Gas Temperature | 445 °C | TBA |
| | Exhaust Gas Flow (Prime) | 45 l/s | TBA |
| | Maximum Exhaust System Back Pressure | 10.2 kPa | TBA |
| | Muffler | residential (20→25 dB) | industrial(15→25 dB) |
| | | Stainless Steel exhaust flex- | |
| DC System-Starting/Charging | Cranking Battery Voltage | 12 V | |
| | Battery Charging Alternator | 15 A | |
| | | Dc Voltage Monitoring via control | |
| Heat Rejection(prime) | Radiated Heat to Ambient | 3.2 KW | TBA |
| | Heat Rejection to Coolant | 11.6 KW | TBA |
| | Heat Rejection to Exhaust | 9.3 KW | TBA |
| | Heat Rejection to intercooler | None | TBA |
| Lube System | Lubricating System Oil Capacity | 4.9 L | |
| Governor | Mechanical | | |



Alternator, LSA TAL040B

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|--|---|-----------------------------------|-------------|
| Structure | Insulation System | Class H | |
| | Winding Pitch | 2/3 to minimize harmonics effects | |
| | Number of Poles | 4 | |
| | Number of Bearings | Single bearing | |
| | Winding Leads | 12 | |
| | Power Factor | 0.8 | |
| | Over Speed Capability (% of | 2250 Rpm (150%) | |
| | Wave Form Distortion | no load < 3% - on load < 2% | |
| | Telephone Interference | TIF < 50 | |
| | IP Rating (Protection) | IP23 | |
| AVR | SHUNT (12 wire) | | |
| | Synchronous, 3 phase, Brushless & Self ventilated | | |
| | | 1500 | 1800 |
| Power Switching | 3-P/2-P Circuit Breaker, MCB | 16A | 20A |
| Temperature | Temperature Rise | 125/40 °C | |
| Control & Voltage Regulator | Control System (Standard) | SHUNT (12 wire) | |
| | Voltage Regulator (AVR) | R 220 | |
| | % Of Voltage Regulation | ± 0,5 % | |
| Motor Starting Capacity@30% | if voltage 230/400V | TBA | |
| Voltage Dip | if voltage 277/480V | TBA | |



METS ENERGY

Standard Controller, M-DCM-317

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

Optional Accessories

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



Optional Accessories^(continues)

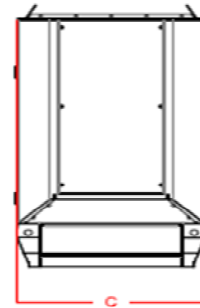
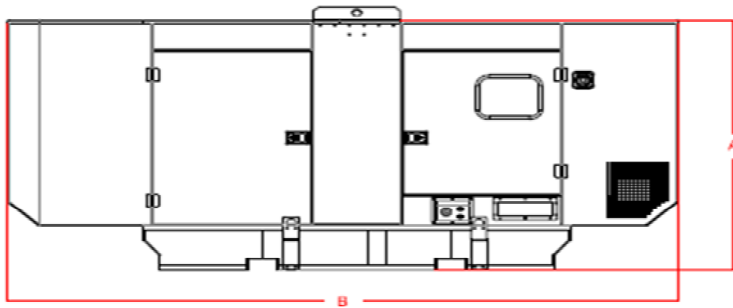
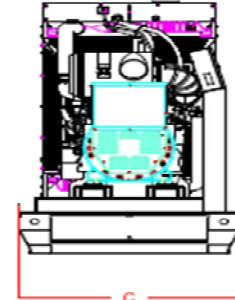
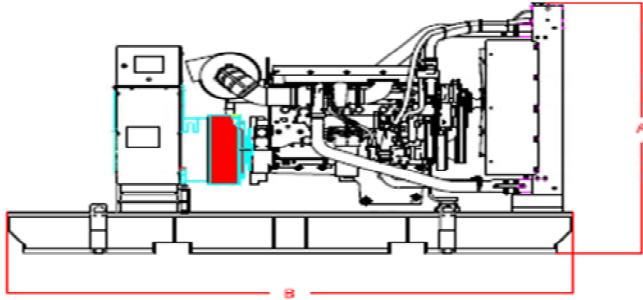
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|---------------|--------------------------------------|---|
| Engine | Fuel | <ul style="list-style-type: none"> Micro-Diesel Filter for Micro-Particles Filtration Automatic Fuel Refilling System Fuel Water Separator (2000/5) Mechanical Fuel Level Kit Oversize Fuel Tank Upon Custom Requirements Fuel Tanks-Pipes Heater Optional Built in fuel tank 62 L operation full load (Height will be increased by 100 mm and weight by 20 |
| | Air Inlet | Sy-klone Air Cleaner Installed @ Air Intake System |
| | Exhaust | <ul style="list-style-type: none"> Muffler: Critical (25→30 dB) Hospital (35→40 dB) Elbow, Flanges, Expanders & Y Adaptors |
| | Cooling / Heating | <ul style="list-style-type: none"> Radiator with 35 °C or 60 °C Ambient Capability Jacket Water Heater |
| | Lube | <ul style="list-style-type: none"> Manual Sump Drain Pump Semi-Rotator Hand Pump |
| | DC System - Starting/Changing | <ul style="list-style-type: none"> 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 |
| | Control Panel | <ul style="list-style-type: none"> 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 Dry Contacts Alarm Indication for Customer Use Audible Alarm (Option for 6010/20; Standard for 7000 Series & Above); Voltage Adjust Potentiometer; Speed Adjust Potentiometer; |



METS ENERGY S.p.A.

Dimensions & Weights

| | Length (mm) | Width (mm) | Height (mm) | Weight Dry (Kg) |
|----------------------|-------------|------------|-------------|-----------------|
| Open set (NB) | 1500 | 760 | 1070 | 465 |
| SPC Type S | 1990 | 760 | 1240 | 690 |



Drawings for illustration purposes only.

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