



METS ENERGY S A L

Model	MP80-M		MP90@6-M			
Frequency/Speed - Voltage	50HZ/1500 RPM- 230/400V		60HZ/1800 RPM- 230/400V		60HZ/1800 RPM- 277/480V	
Prime Power	80 KVA	48 KW	84 KVA	67.2 KW	90 KVA	72 KW
Standby Power	66 KVA	52.8 KW	92.4 KVA	73.9 KW	99 KVA	79 KW



Image for illustration purposes only.

Features

Engine	Perkins ,1104A-44TG2 , Made in UK, in accordance to ISO3046 ,ISO8528,DIN6271
Alternator	Meccalte, ECP32 -4L/4 , Made in UK, complying to the following norms:CEE/ CEI2-3/ EN60034-1/ IEC34-1/ VDE/ BS/ CAN/ CSA
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

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.
	KVA Rating @ 0.8 P.F

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

Rev0_MP80-M/MP90@6-M_230413



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Engine Perkins, 1104A-44TG2, 4 Stroke Cycle, Diesel				
Structure	Number of Cylinders	4		
	Engine Build	In line		
	Bore	105 mm		
	Stroke	127 mm		
	Displacement	4.4 L		
	Compression Ratio	17.25/1		
	Aspiration	Turbocharged		
	Cooling	Water cooled		
Fuel	Fuel Tank	1500 rpm Built in fuel tank 255 L for 13 hours operation @ full load	1800 rpm Built in fuel tank 255 L for 11 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)	215.3 (18.7)		223 (22.3)
	75% Load (g/kWh-L/hr)	214.9 (14)		225.3 (16.9)
	50% Load (g/kWh-L/hr)	223 (9.7)		238 (11.9)
Cooling system	Engine Coolant Capacity		13L	
	Air Flow-Radiator	1483.3 l/s	1850 l/s	
	radiator with 50 degree ambient capability Cooling Package & Air Cleaner Kit Thermostatically-controlled system			
Air Inlet	Air Intake Engine (Clean Filter/Dirty)	5/ 8 KPa		
Exhaust System	Exhaust Gas Temperature (Prime)	555 °C	535 °C	
	Exhaust Gas Flow (Prime)	208.3 l/s	250 l/s	
	Maximum Exhaust System Back Pressure	10 kPa	10 kPa	
	Muffler residential (20→25 dB) industrial(15→25 dB) Stainless Steel exhaust flex-fittings			
DC System-Starting/Charging	Cranking Battery Voltage	12 V		
	Battery Charging Alternator	65 A		
Heat Rejection(Prime)	Dc Voltage Monitoring via control panel			
	Radiated Heat to Ambient (Prime)	13 kW	14 kW	
	Heat Rejection to Coolant (Prime)	46 kW	53 kW	
	Heat Rejection to Exhaust (Prime)	53 kW	68 kW	
Lube System	Heat Rejection to intercooler (prime)	0	68 kW	
	Lubricating System Oil Capacity	8 L		
Governor	Mechanical			

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Alternator Meccalte, ECP32 -4L/4

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	2.3/2 % @ full Load , 2.6/2.6% @ no Load	
	Telephone Interference	THF< 2%	
	IP Rating (Protection)	IP23(other Protection on request)	
AVR	DSR (1-phase sensing/ additional equipment for 3-phase sensing)		
	Synchronous, 3 phase, Brushless & Self ventilated		
		1500 rpm	1800 rpm
Power Switching	3-P Circuit Breaker, MCCB	125A	160A
Temperature	Temperature Rise	125/40 °C	
Control & Voltage Regulator	Control System (Standard)	MAUX excitation	
	Voltage Regulator (AVR)	DSR (1-phase sensing/ additional equipment for 3-phase sensing)	
	% Of Voltage Regulation	± 1.0 %	
Motor Starting Capacity@30%	if voltage 230/400V	TBA	
Voltage Dip	if voltage 277/480V	TBA	

Standard Controller, M-DCM-317

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

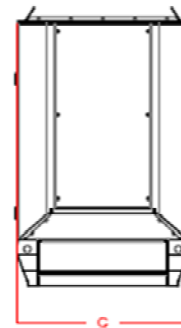
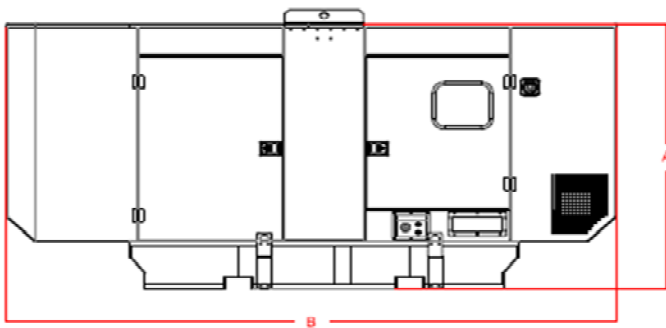
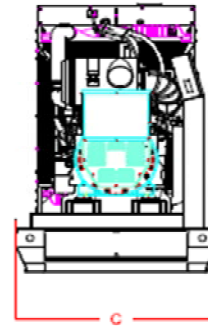
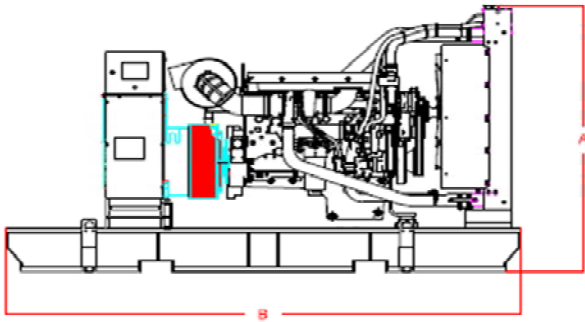


Optional Accessories^(continues)

Engine	Fuel	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 180 L operation full load (Height will be increased by 100 mm and weight by 20 kg)	
		Air Inlet	Sy-klone Air Cleaner Installed @ Air Intake System
		Exhaust	Muffler: Critical (25→30 dB) Hospital (35→40 dB)
			Elbow, Flanges, Expanders & Y Adaptors
Cooling / Heating	Radiator with 35 °C or 60 °C Ambient Capability		
	Jacket Water Heater		
Lube	Manual Sump Drain Pump		
	Semi-Rotator Hand Pump		
DC System - Starting/Changing	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)		
Control Panel	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 (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
Open set (NB)	2110	1060		1380	1212
SPC Type S	2048	1060		1575	1649



Drawings for illustration purposes only.

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