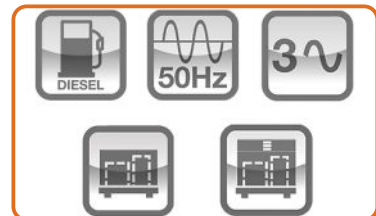


## GMM-60P/FS3 [3P - 50Hz - 400-231V]



### Power Rating

Emergency Standby Power ESP	kVA	65.9
Emergency Standby Power ESP	kW	52.7
Prime power PRP	kVA	60.3
Prime power PRP	kW	48.2
Voltage	V	400/231
Frequency	Hz	50
Power factor	cos $\phi$	0.8
Phases		3
Fuel		Diesel



### Ratings definition (ISO-8528)

#### ESP - Emergency Standby Power:

It is the maximum power available during a variable electrical power sequence, under the stated operating conditions, for which a generating set is capable of delivering in the event of a utility power outage or under test conditions for up to 200 h of operation per year with the maintenance intervals and procedures being carried out as prescribed by the manufacturers. The permissible average power output over 24 h of operation shall not exceed 70 % of the ESP.

#### PRP - Prime Power:

It is defined as being the maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load when operated for an unlimited number of hours per year under the agreed operating conditions with the maintenance intervals and procedures being carried out as prescribed by the manufacturer. The permissible average power output over 24 h of operation shall not exceed 70 % of the prime power.

**G2 class load acceptance in accordance with ISO 8528-5:2013** Higher performance classes check upon request.

#### Gensets are compliant with EC mark which includes the following directives:

- 2006/42/CE Machinery safety.
- 2014/30/UE Electromagnetic compatibility.
- 2014/35/UE electrical equipment designed for use within certain voltage limits
- 2000/14/EC Sound Power level. Noise emissions outdoor equipment. (amended by 2005/88/EC) – If applicable
- 97/68/EC Emissions of gaseous and particulate pollutants. (amended by 2002/88/EC & 2004/26/EC) – If applicable
- EN 12100, EN 13857, EN 60204

**Company with quality certification ISO 9001**



## Engine specifications

Engine brand	Perkins	
Model	1104D-44TG2	
Operation Speed Nominal	rpm	1500
Engine cooling system	Water	
Exhaust emission level	Stage IIIA	
Nr. of cylinder and disposition	4 in line	
Displacement	cm <sup>3</sup>	4400
Aspiration	Type	Turbocharged
Speed governor	Electronic	
Gross Engine Power ESP	kWm	61.6
Gross Engine Power PRP	kWm	56.6
Fan Power	kWm	2.6
Fan Air flow	m <sup>3</sup> /min	182
Total Oil capacity	l	8
Lube oil consumption @ PRP (max)	% fuel consumption	0.15
Total Coolant capacity	l	16.5
Fuel	Diesel	
Specific Fuel consumption @75% PRP	g/kWh	232
Specific Fuel consumption @50% PRP	g/kWh	230
Starting system	Electric	
Electric circuit	V	12



## Alternator specifications

Alternator brand	Mecc alte	
Model	ECP32-2M4 C	
Winding	Standard	
Winding Connections	Type	Series Star
Frequency	Hz	50
Voltage	V	400
Phases	3	
Power factor	cos $\phi$	0.8
Stand-by rating 27°C	kVA	68.8
Continuous Nominal Rating 40°C	kVA	62.5
Efficiency @ 100% of load	%	89.4
Type	Brushless	
Poles	4	
Standard AVR	DSR	
Voltage tolerance	%	1
Class	H	
IP protection	23	
Cooling air	m <sup>3</sup> /s	0.26



**Installation data**

Cooling air	m <sup>3</sup> /min	202
Exhaust gas flow @ PRP	m <sup>3</sup> /min	11.5
Exhaust gas temperature	°C	560
Fuel consumption @ 50% PRP	l/h	7.99
Fuel consumption @ 75% PRP	l/h	11.73
Fuel consumption @ 100% PRP	l/h	15.81

**Fuel Tank - Options Available:**

To be ordered with the equipment

**AUTONOMY**

8PFT Running time @ 75% PRP	h	17.82
MFT-S Running time @ 75% PRP	h	10.23
MFT-M Running time @ 75% PRP	h	25.58



<b>PFT</b> Plastic Fuel Tank	Type	8
8PFT Fuel tank capacity	l	209
8PFT Fuel tank location		Internal



<b>MFT</b> Metal Fuel Tank	Type	S
MFT-S Fuel tank capacity	l	120
MFT-S Fuel tank location		Internal

<b>MFT</b> Metal Fuel Tank	Type	M
MFT-M Fuel tank capacity	l	300
MFT-M Fuel tank location		Internal

**Electrical Data**

Battery Voltage	V	12
Genset Voltage	V	400/231
Frequency	Hz	50
Phases		3
Power Factor	cos $\phi$	0.8
MAX current	A	95
NOMINAL current	A	87
Circuit breaker	A	100



**Control panel - Options Available:**

MANUAL REMOTE START PANEL	MRS
AUTOMATIC CONTROL PANEL	ACP
MODULAR PARALLEL PANEL	MPP



**MRS - MANUAL REMOTE START PANEL**

- Manual and remote start controller
- Automatic mains failure start function
- 3 phase mains measurements
- 3 phase generator protections
- Running hours
- 10 events, warnings or shutdown alarms with running hours stamp

Power supply by circuit breaker and/or terminal bus bar



**ACP - AUTOMATIC CONTROL PANEL**

- Auto Mains Failure (AMF) function
- Gen-set controller for single genset operating in standby or prime power modes
- Full gen-set monitoring and protection
- Detailed event and performance log with time and date
- Wide range of remote control modules available as option
- Wide range of I/O expansion modules available as option

Power supply by circuit breaker and/or terminal bus bar



**MPP - MODULAR PARALLEL PANEL**

- Modular parallel panel allows the genset to work in parallel (up to 32 gen-sets)
- Easy switching between parallel to mains or multiple genset applications
- Full gen-set monitoring and protection
- Detailed event and performance log with time and date
- On-screen trends
- Colour display 5" TFT with 800x480 px resolution
- Wide range of communication and connection capabilities available

Power supply by circuit breaker and/or terminal bus bar



**CONTROL PANEL - Optional Equipment:**

External terminal board	ETB
Differential Protection	ADI



## SOCKETS PANEL

- Sockets panel positioned on the frontal side, separated from control panel cabinets
- High flexibility of sockets kit scope of supply
- Easy and fast power cables connection
- Sockets kit to be define during the order



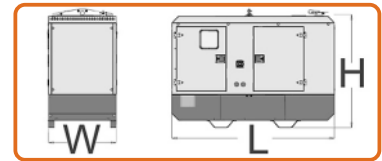
## CANOPY VERSION

- Weatherproof Enclosure made of galvanized sheet metal allows to protect genset from corrosion and aggressive condition
- Soundproofed enclosure tanks to high quality soundproof material and residential silencer, allows to have low noise emission level
- Three big large lateral doors allows an easy service and maintenance operation
- Doors equipped with key lockable handles
- Baseframe made of welded steel profile
- Anti-vibration mountings properly sized
- Screwed support legs
- Hole for handling by crane
- Moving and rotating parts protection against accidental contact
- Grounding point to connect all metal parts to ground
- Robust Lifting bridge, with single lifting point positioned on the roof



### Dimensional data Canopy Version

Length	(L) mm	2400
Width	(W) mm	1040
Height	(H) mm	1745



Weight	Kg	1220
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## CANOPY EXTRA SILENT VERSION

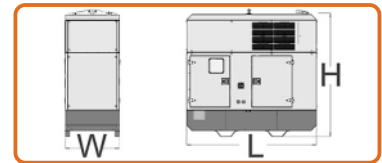
- Extra silent Enclosure with low noise emission, suitable for installation near city centre and in any place where severe noise emission restriction are present
- Extra Silent Enclosure guarantee very low noise emission thanks to an additional soundproofing module on the roof, high quality soundproof material and residential silencer installed inside the enclosure
- Weatherproof Enclosure made of galvanized sheet metal allows to protect genset from corrosion and aggressive condition
- Three big large lateral doors allows an easy service and maintenance operation
- Doors equipped with key lockable handles
- Baseframe made of welded steel profile
- Anti-vibration mountings properly sized
- Screwed support legs
- Hole in the baseframe for handling by crane
- Moving and rotating parts protection against accidental contact
- Grounding point to connect all metal parts to ground
- Robust Lifting bridge, with single lifting point positioned on the roof



### Dimensional data Canopy (Extra Silent Enclosure)

Length	(L) mm	2400
Width	(W) mm	1040
Height	(H) mm	2335

Weight	Kg	1332
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### OPTIONAL FEATURES

To be ordered with the equipment	:
Pre-Heating System	PHS
Air Shut-Off Valve	ASV
Heavy-Duty Air Filter	HDF
Water Separator Filter	WSP
Exhaust Spark Arrestor	ESA
Hot Parts Protection	HPP
Alternator Winding Total Protection	WTP
Alternator anti-condensation heater	ACH
Galvanized skid base with fork lift poin	GSB

