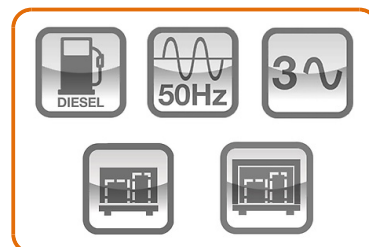


# GMM-85P/FS3A [3P - 50HZ - 230V]



## Power Rating

Emergency Standby Power ESP	kVA	90.9
Emergency Standby Power ESP	kW	72.7
Prime power PRP	kVA	82.3
Prime power PRP	kW	65.8
Voltage	V	230
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.

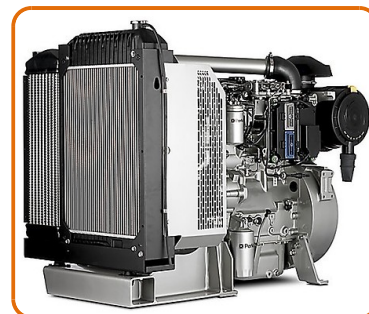
**Gensets are compliant with EC mark which includes the following directives:**

- 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-E44TAG1	
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	84.2
Gross Engine Power PRP	kWm	76.6
Fan Power	kWm	3.4
Fan Air flow	m <sup>3</sup> /min	151.8
Total Oil capacity	l	8
Lube oil consumption PRP (max)	% fuel consumption	0.15
Total Coolant capacity	l	17
Fuel	Diesel	
Specific Fuel consumption 75% PRP	g/kWh	244.2
Starting system	Electric	
Electric circuit	V	12



### Alternator specifications

Alternator brand	Mecc Alte	
Model	ECP32-2L4 C	
Winding	Standard	
Winding Connections	Type	Series Delta
Frequency	Hz	50
Voltage	V	230
Phases	3	
Power factor	cos $\phi$	0.8
Stand-by rating 27°C	kVA	91
Continuous Nominal Rating 40°C	kVA	82.5
Efficiency @ 100% of load	%	90.0
Type	Brushless	
Poles	4	
Voltage tolerance	%	1
Class	H	
IP protection	23	



### Installation data

Cooling air	m <sup>3</sup> /min	173
Exhaust gas flow PRP	m <sup>3</sup> /min	13.8
Exhaust gas temperature	°C	492
Fuel consumption 75% PRP	l/h	16.72
Fuel consumption 100% PRP	l/h	20.38



### Fuel Tank - Options Available:

To be ordered with equipment (when necessary)

#### AUTONOMY

8PFT Running time 75% PRP	h	20.93
MFT-S Running time 75% PRP	h	20.93
MFT-M Running time 75% PRP	h	29.90



<b>PFT</b> Plastic Fuel Tank	Type	8
8PFT Fuel tank capacity	l	350
8PFT Fuel tank location		Internal



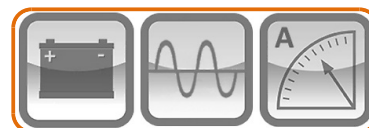
<b>MFT</b> Metal Fuel Tank	Type	S
MFT-S Fuel tank capacity	l	350
MFT-S Fuel tank location		Internal

<b>MFT</b> Metal Fuel Tank	Type	M
MFT-M Fuel tank capacity	l	500
MFT-M Fuel tank location		With sub-base
MFT-M EXTRA Height	mm	238
MFT-M EXTRA Weight	Kg	293



### Electrical Data

Battery Voltage	V	12
Genset Voltage	V	230
Frequency	Hz	50
Phases		3
Power Factor	cos $\phi$	0.8
Max current	A	228
Nominal current	A	206
Circuit breaker	A	250



### 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
- 50 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 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
- Wide range of communication and connection capabilities available

Power supply by terminal bus bar



### CONTROL PANEL - Optional Equipment:

External terminal board	ETB
Differential Protection	ADI



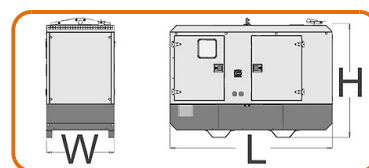
## CANOPY VERSION

- 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
- 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	2757
Width	(W) mm	1120
Height	(H) mm	1852



Weight	Kg	1446
--------	----	------

### Noise Level Canopy Version

Guaranteed noise level (LWA)	dB(A)	97
Noise pressure level @ 1 m	dB(A)	79
Noise pressure level @ 7 m	dB(A)	68



## 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 modules, 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
- 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	2757
Width	(W) mm	1120
Height	(H) mm	2438

Weight	Kg	1631
--------	----	------

### Noise Level Canopy (Extra Silent Enclosure)

Guaranteed noise level (LWA)	dB(A)	93
Noise pressure level @ 1 m	dB(A)	75
Noise pressure level @ 7 m	dB(A)	64

### OPTIONAL FEATURES

To be ordered with equipment (when necessary)	:
Pre-Heating System	PHS
Air Shut-Off Valve	ASV
Electronic Engine Governor	EEG
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 point	GSB

