

## GE.AIS5.090/085.SS+012

1500 rpm - Trifase - 50Hz - 400V  
Manual panel with sockets module



Image for demonstration purposes

## Standard equipment

### ⚙️ Canopy Soundproofing

Removable soundproof canopy  
Painting canopy (RAL) in galvanized sheet steel  
Soundproofing with class 1 polyester material  
Handles with key lock and automatic closing  
Special baffles for air intake and air expulsion  
Inspection doors for controls and maintenance

### ⚙️ Exhaust

Exhaust rain cap  
Insulated exhaust pipes  
Internal residential muffler - 35dB(A)

### ⚙️ Fuel Supply

Single wall daily tank with bunded base  
Automatic shutdown system for low fuel level  
Fuel gauge

### ⚙️ Handling

Lifting hook integrated into the bearing structure  
Base frame with anti-overturning forklift pockets  
forkliftable on the short side

### ⚙️ Base Frame

Bunded base at 110% of fuel tank capacity  
Anti-vibrating mounting pads  
Battery compartment externally accessible for easy service

### ⚙️ Engine

High coolant temperature and low oil pressure shutdown system  
External oil drain points  
Engine liquids (oil and antifreeze)  
Tropicalized radiator  
Rotating parts protection  
Electronic speed governor

### ⚙️ Alternator

AVR Automatic Voltage Regulator  
Impregnation for marine environment  
IP23

### ⚙️ Panel & connection

Emergency Stop button  
Differential  
Tamperproof panel IP55  
Cable output from the bottom  
IP44 wiring  
Start-up battery (pre-charged)  
Grounding point

### ⚙️ Documentation

CE conformity declaration  
User and Maintenance manual  
Wirings diagrams

### ⚙️ Normatives

All Generating sets are compliant to CE Marking  
2014/30/UE Electromagnetic compatibility  
2000/14/CE Noise Emission for outdoor use  
Factory-designed systems built according to ISO 9001:2015  
CEI EN 60204-1:2018 - Electrical equipment of machines

## Primary data

### General Information

Speed	RPM	1500
Frequency	Hz	50
PRP - Prime power	KVA	80
LTP - Standby power	KVA	90
PRP - Prime power	KW	64
LTP - Standby power	KW	72
Standard Voltage	V	400/230
Current	A	115.61
Voltage for current calculation	V	400
COSFI	0,8	0,8

### General electrical protection

Rated current	A	125
Type	Magnetothermal switch on panel board	
Poles	N	4P
Optional/notes	Regolabile	

### Noise level +/- 3dB(A)

LWA	dB(A)	91
Sound pressure level @ 7 mt	dB(A)	66
Sound pressure level @ 1 mt	dB(A)	75

### Fuel Consumption

TYPE	Diesel	
Standard Fuel Tank capacity	lt	250
Autonomy @ 75% load	h	20
Fuel consumption at 100% load	lt/h	17,2
Fuel consumption at 75% load	lt/h	12,7
Fuel consumption at 50% load	lt/h	8,5

### General data

Rated capacity	Ah	1x120
Auxiliary Voltage	V	12
Exhaust gas temperature	°C	740
Exhaust gas flow	l/s	283,8
Combustion air flow	l/s	83,9
Cooling fan airflow	mc/s	1,8
Exhaust diameter	mm	80

### Weight and Dimensions

Dimensions (L x W x H)	cm	260x110x185
Weight with liquids (excluding optionals and fuel)	Kg (+/-3%)	1463

## Engine

Factory		<b>FPT</b>
Model		<b>F36ETVP03.A85</b>
Emissions stage		<b>Stage 5</b>
Speed governor		<b>Electronic</b>
Radiator	°C	<b>50</b>
Cooling	<i>Tipo</i>	<b>liquid (water + 50% Paraflu11)</b>
Active net power	<i>Kwm</i>	<b>74,3</b>
Nominal net power	<i>CV</i>	<b>101</b>
Cycle	<i>Tipo</i>	<b>4 strokes</b>
Injection	<i>Tipo</i>	<b>Direct</b>
Aspiration	<i>Tipo</i>	<b>Turbo</b>
Numbers of cylinders	<i>N</i>	<b>4</b>
Cylinders arrangement		<b>L</b>
Bore	<i>mm</i>	<b>102</b>
Stroke	<i>mm</i>	<b>110</b>
Total displacement	<i>lt</i>	<b>3,6</b>
Engine oil features		<b>15W40-API CI-4/CH-4 ACEA E5-E7</b>
Engine oil consumption	<i>%</i>	<b>&lt;0.25</b>
Total oil capacity	<i>lt</i>	<b>9,5</b>
Total coolant capacity	<i>lt</i>	<b>10,5</b>
ISO 8528-5 class		<b>G2</b>
Total Adblue - DEF capacity	<i>l</i>	<b>43</b>
Adblue - DEF consumption (% of fuel consumption)	<i>%</i>	<b>4÷7</b>

## Alternator

**\* May vary based on stock availability. However, a primary brand will be used.**

Factory		<b>Stamford</b>
Model		<b>UCI224G</b>
PRP continuous power	<i>KVA</i>	<b>85</b>
Voltage Regulator (voltage accuracy)	<i>+/- %</i>	<b>1</b>
Poles	<i>N°</i>	<b>4</b>
Phases	<i>N°</i>	<b>3+N</b>
Standard windings connection		<b>Star Series</b>
Stator/rotor impregnation		<b>H (Outdoor Temp 40°C)</b>
Efficiency	<i>%</i>	<b>90,2</b>
Engine coupling		<b>Elastic disk</b>
Short circuit current		<b>3x In (only with AVR MX321 or MX341)</b>
Protection degree	<i>IP</i>	<b>23</b>
Cooling system		<b>Self ventilating</b>
Maxium overspeed	<i>rpm</i>	<b>2250</b>
Waveform distortion	<i>%</i>	<b>&lt;5</b>
Exciter		<b>Diode bridge</b>

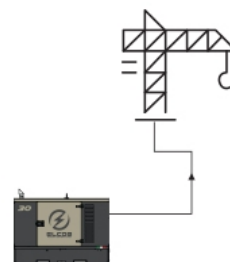
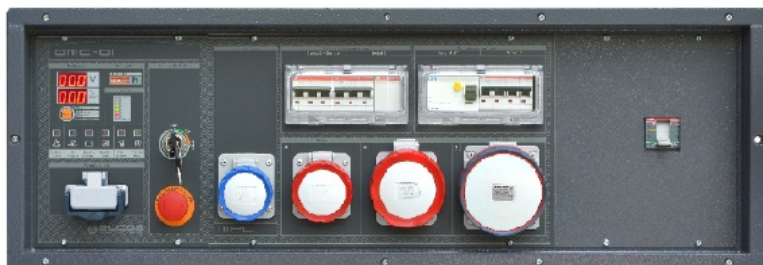
## Environmental conditions

Ambient temperature	°C	<b>40</b>
Relative Humidity	<i>%</i>	<b>60</b>

Max altitude *mt* **1000**

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# Control Systems on board QMC-MAN-3F-4P-160-O2



operating scheme - schema di funzionamento

## QMC Manual panel with sockets module

The manual control panel type QMC provides a reliable and simple solution for the control of the generating set. Thanks to the SM1 control module, the QMC control panel can allow the manual start and stop of the gen set and it can monitor the different parameters during its operation. The SM1 module allows you to connect some optional devices (provided by Elcos) for a complete remote management of the gen set.

### Mechanical features

Protection degree	IP	55
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### Sockets module

Protection	Type	Differential Magnetothermal breakers
Differential Sensivity	mA	30 (only for 16A and 32A)
Sockets		N. 1 CE 2P+T 16A 230V
Sockets		N. 1 CE 3P+T+N 16A 400V
Sockets		N. 1 CE 3P+N+T 32A 400V
Sockets		N. 1 CE 3P+N+T 63A 400V

## Control Module



Model	SM1
Operating mode	Manual

### Specifics

#### Applications

Stand-alone  
Construction site/Rental  
Self-production

#### ENGINE MEASURES

Fuel tank level %  
Total run time  
Battery voltage

#### ALTERNATOR MEASURES

Generator Voltage L1, L2  
Generator frequency  
Generator current L1  
Generator Apparent Power kVA

#### EQUIPMENT

Voltmeter  
Frequency meter  
Ammeter  
KW meter  
Battery Voltage  
Hour counter  
Fuel level  
Starting key removable  
Remote control connector

#### PRE-ALARMS/ ALARMS

Common Alarm  
Fuel reserve (pre-alarm)  
Charge alternator failed (dinamo)  
Low oil pressure (alarm)  
High coolant temperature (alarm)

#### VISUALIZATIONS ON CONTROL MODULE/DISPLAY

Glow plugs status

#### CONTROL MODULE FUNCTIONS

Manual Start and Stop by key  
Emergency stop button on panel board

## OPTIONAL

### Fuel Supply



#### O.G-ACO-AT-C3V-01

External fuel tank connections with 3-way valve for supply from internal or external tank (10/100 kVA)



#### O.G-ACO-AT-C3V-AR-01

Quick coupling connectors with 3-way valve for internal or external fuel tank connection (10/100 kVA)



#### O.G-ACO-AT-CI-01

External tank connections for supply only from external tank (g without tank) GE 10/100



#### O.G-ACO-BT-C2600-1000

1000 Lt Oversized Fuel Tank on board for SS (80/100 kVA)



#### O.G-ACO-GA-01

Mechanical analogue float for internal fuel tank on board



#### O.G-ACO-GA-02

Electrical analogue float to monitor the external refilling point on board



#### O.G-ACO-RE-01

External refilling point for Gen Sets 10/250 kVA, SS, RB versions



#### O.G-ACO-RE-SP-01

External refilling point with warning light for Gen Sets 10/250 kVA, SS, RB versions



#### O.G-ACO-SP-01

Tank leak sensor with signal reported in the QPE/QLE-B control panel



#### O.G-ACO-ST-BG-ES1

"Easy" automatic fuel refilling system on board, controlled by QPE-C and QLE-B panels



#### O.G-ACO-ST-BG-STD

"Standard" automatic fuel refilling system on board, controlled by QPE-C and QLE-B panels



#### O.G-ACO-TK-ST-250

Partitioned metal tank and reinforced brackets for transport on trailer (SS only)

### Alternator

#### O.G-ALT-AL-CHBR-02

Different brand alternator 50/100 kVA (Check dimensions)



#### O.G-ALT-AL-COTE-01

Temperature control unit up to 4 x PT100 probes for MC4 management

#### O.G-ALT-SEZ-IT-TN

Disconnecter for IT/TN system installed on the alternator for Gen-sets from 10 to 500 KVA only SS and RB version (check the feasibility)

#### O.G-ALT-ST-ACO-01

Anti-condensation heater 230 V (on Stamford from 80 to 2000 kVA)



#### O.G-ALT-ST-AVR-MX321

Stamford MX321 automatic voltage regulator with PMG (Check dimensions)


**O.G-ALT-ST-AVR-MX341**

Stamford MX341 automatic voltage regulator with PMG (Check dimensions)


**O.G-ALT-ST-PT100-1CU**

1 x PT100 probe on bearing (80/3000 kVA)


**O.G-ALT-ST-PT100-3AV**

nr. 3 RTD-PT100 probes on stator windings (80/3000 kVA)


**O.G-ALT-ST-PT100-6AV**

nr. 3+3 RTD-PT100 probes on stator windings (80/3000 kVA)


**O.G-ALT-ST-RIGU-01**

Diode Failure Detector (DFD) mounted on the alternator. Alarm contact available into the panel

### Batteries


**O.G-BAT-BAE-02**

Maintenance free high efficiency starter batteries (50/100 kVA)


**O.G-BAT-DOB-01**

Redundant battery kit for Gen Sets 50/100 kVA


**O.G-BAT-STB-01**

Battery isolator lockable (10/100 kVA)

### Canopy


**O.G-COF-AM-01**

Hinges and Doors with tamper-proof device (10/100 kVA)


**O.G-COF-AP-01**

Door opening alarm system (each door)

**O.G-COF-C2600-INOX**

Additional cost for stainless steel canopy (C2600)


**O.G-COF-CA-C2600**

IP 43 Conveyors for Gen Sets 80/100 kVA - supplied disassembled


**O.G-COF-CH-04**

Additional cost for larger canopy C3400 instead of standard C2600 - Dim. cm 340x120x195H - Fuel tank 400lt


**O.G-COF-DLO-C2600-25KW**

Dummy Load 25kW on board for GE 80/100 kVA (Add optional O.Q-QPE-RIL-16RELE in case of MC4 control. Add optional O.Q-QBM-COM-BIO8 for Comap AMF25, IG200, IG500 control. For other controls, check with technical department.)


**O.G-COF-EAF-03**

Frontal air expulsion for Gen Sets 50/100 kVA (C2200/C2600) (change the noise level)

**O.G-COF-IL-INT-01**

Internal LED lighting with micro-switches for Gen Sets 10/250 kVA

### Test




**MS.CP-LT-01**

FAT - Factory Acceptance Test for single Gen Set from 10 to 100 kVA according to our standard procedures in Elcos factory (max 2 hours - max 4 people - max 1 hour of operation)


**MS.CP-SP-01**

FAT - Factory Acceptance Test for single custom Gen Set from 10 to 100 kVA max 4 operating hours or parallel system up to 4 units for 1 operating hour, in Elcos factory (max 4 hours - max 4 people )

**MS.CP-ST-01**

FAT - Factory Acceptance Test for single Gen Set from 10 to 100 kVA according to our standard procedures in Elcos factory (max 4 hours - max 4 people - max 2 hour of operation)


**MS.RF-ST-01**

Noise test report for single Gen Set from 10 to 250 kVA


**MS.TV-ST-01**

Vibration test on 10 points with certificate for single Gen Set from 10 to 250 kVA

## PRP

Engines of this rating provide unlimited hours of usage in a variable load application. The average load factor should not exceed 70% of the engine's prime power rating with a maximum number of 500 operational hours at 100% prime power rating. An overload capability of 10% is available, however, is limited to a period of 1 in every 12 hours

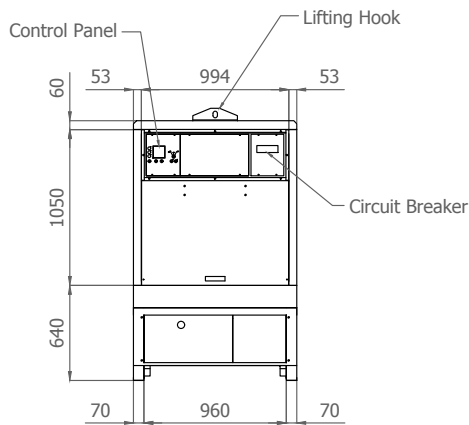
## LTP

Limited-time running power is defined as the maximum power available, under the agreed operating conditions, for which the generating set is capable of delivering for up to 500h of operation per year with the maintenance intervals. The overload is not allowed.

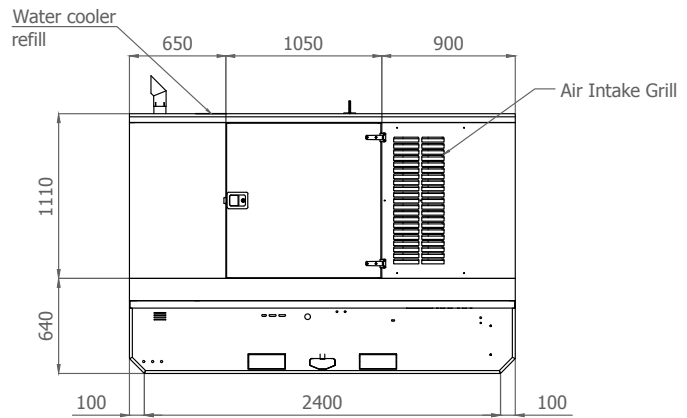
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## OVERALL DIMENSIONS [mm]

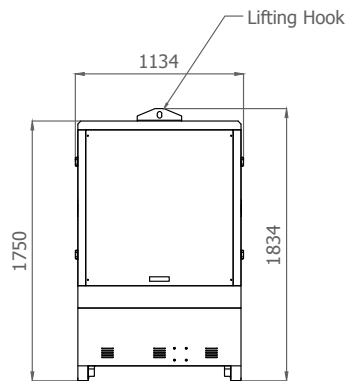
REAR VIEW



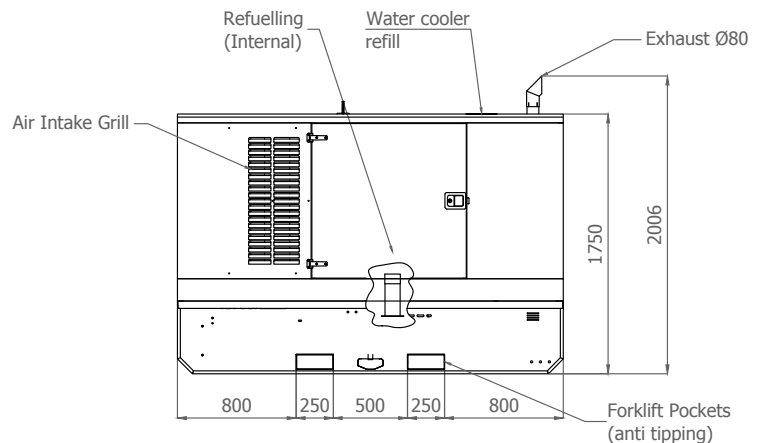
LEFT SIDE VIEW



FRONT VIEW



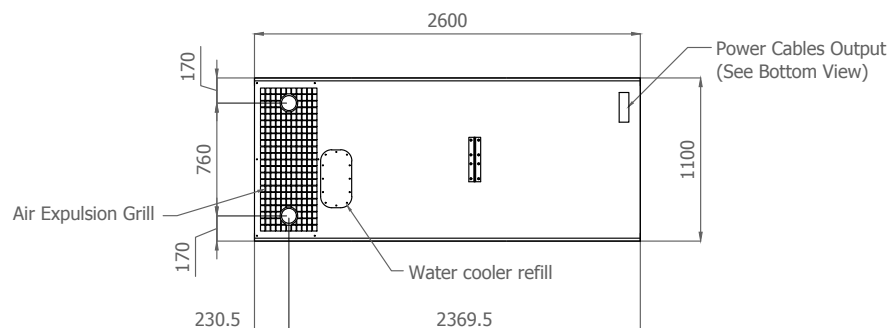
RIGHT SIDE VIEW



TOP VIEW

Right

Front



Rear

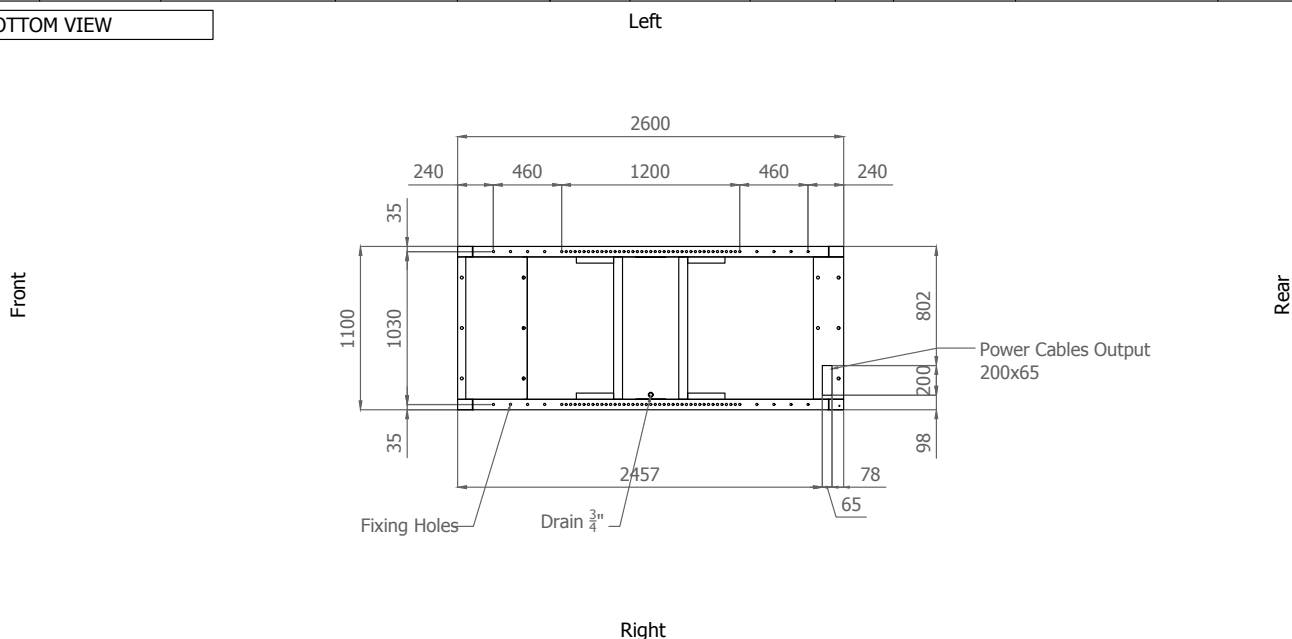
Left

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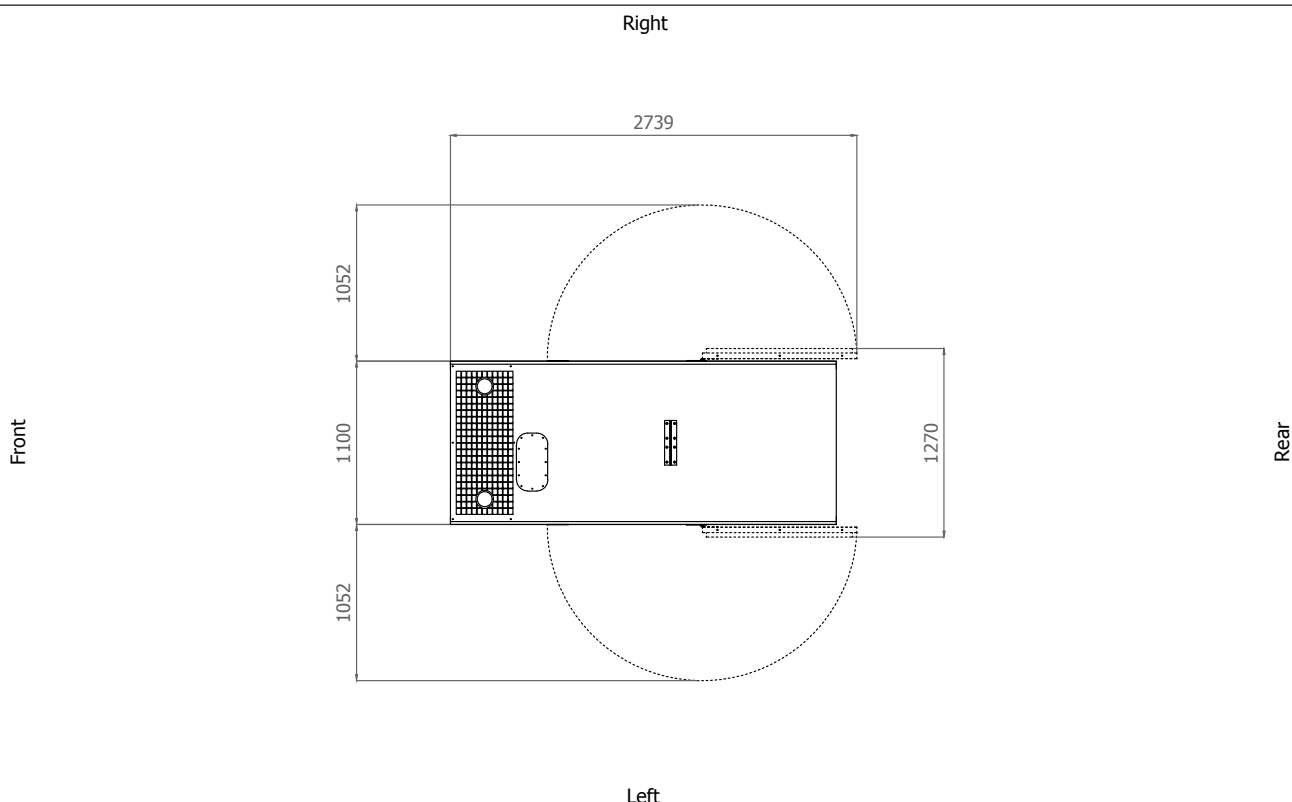
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# BOTTOM VIEW



## DIMENSIONS WITH OPEN DOORS [mm]



Note: With Lifting-Off Door Solution consider only canopy dimensions.  
(Models with "Control Panel" behind rear door will mount a special cover to protect it)

## VENTILATION OF THE ROOM

The windows area in the generating set room needs to be (recommended):

Aspiration: 1.00 m<sup>2</sup>

Expulsion: 0.60 m<sup>2</sup>

ATTENTION: for a correct ventilation the expulsion air and the exhaust gas needs to be conveyed in the open-air

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