

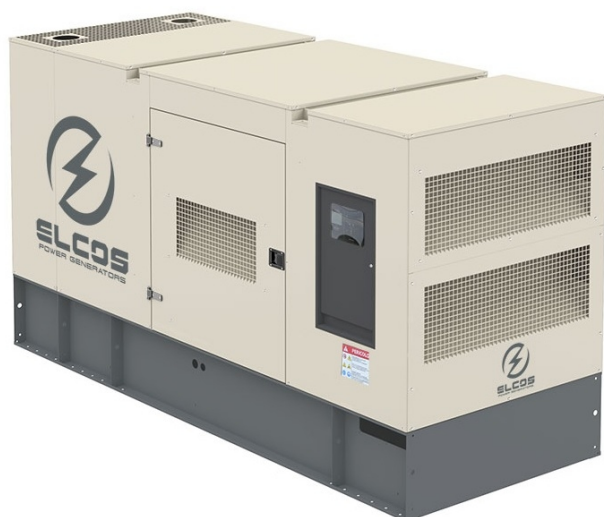


Image for demonstration purposes

 **Generating Set**  
**PROFESSIONAL - Diesel**

## GE.AI.385/350.PRO+011

1500 rpm - Threephase - 50Hz - 400V  
Multifunction panel without switching on board



## 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  
Inspection doors for controls and maintenance  
Inspection doors with hermetic gasket

### ⚙️ Exhaust

Exhaust rain cap  
Insulated exhaust pipes  
Internal residential muffler

### ⚙️ Fuel Supply

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

### ⚙️ Handling

N.4 lifting hooks integrated into the bearing structure  
Loadable side by side for truck transportation

### ⚙️ Base Frame

Anti-vibrating mounting pads  
Anti pollution bunded base

### ⚙️ Engine

Oil pressure and coolant temperature gauge (only with qpe or +14 variant)  
Tropicalized radiator  
Electronic speed governor

### ⚙️ Alternator

Avr automatic voltage regulator  
Avr pre-arranged for parallel  
Impregnation for marine environment  
Ip23

### ⚙️ Panel & connection

Emergency stop button  
Magnetothermal circuit breaker on alternator board  
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                             | KVA | 350     |
| Prp - prime power               | KW  | 280,0   |
| Ltp - standby power             | KVA | 385     |
| Ltp - standby power             | KW  | 308,0   |
| Standard voltage                | V   | 400/230 |
| Current                         | A   | 505,78  |
| Voltage for current calculation | V   | 400     |
| Cosfi                           | 0,8 | 0,8     |

### General electrical protection

|                               |                                               |     |
|-------------------------------|-----------------------------------------------|-----|
| Circuit-breaker rated current | A                                             | 630 |
| Type                          | Magnetothermal switch on the alternator board |     |
| Circuit-breaker poles         | N                                             | 4P  |

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

|                             |       |    |
|-----------------------------|-------|----|
| LWA                         | dB(A) | 96 |
| Sound pressure level @ 7 mt | dB(A) | 71 |
| Sound pressure level @ 1 mt | dB(A) | 80 |

### Fuel Consumption

|                               |        |      |
|-------------------------------|--------|------|
| Type                          | Diesel |      |
| Standard fuel tank capacity   | lt     | 400  |
| Autonomy @ 75% load           | h      | 8    |
| Fuel consumption at 100% load | lt/h   | 70   |
| Fuel consumption at 75% load  | lt/h   | 56   |
| Fuel consumption at 50% load  | lt/h   | 38,8 |

### General data

|                         |      |       |
|-------------------------|------|-------|
| Rated capacity          | Ah   | 2x180 |
| Auxiliary voltage       | V    | 24    |
| Exhaust gas temperature | °C   | 479   |
| Exhaust gas flow        | l/s  | 391,3 |
| Combustion air flow     | l/s  | 415   |
| Cooling fan airflow     | mc/s | 6,8   |
| Exhaust diameter        | mm   | 140   |

### Weight and Dimensions

|                                                    |            |             |
|----------------------------------------------------|------------|-------------|
| Dimensions (l x w x h)                             | cm         | 395x154x220 |
| Weight with liquids (excluding optionals and fuel) | Kg (+/-3%) | 3801        |

## Engine

|                        |      |                                       |
|------------------------|------|---------------------------------------|
| Factory                |      | <b>FPT</b>                            |
| Model                  |      | <b>C13TE2A</b>                        |
| Emissions stage        |      | <b>Stage 2</b>                        |
| Speed governor         |      | <b>Electronic</b>                     |
| Radiator               | °C   | <b>50</b>                             |
| Cooling                | Tipo | <b>liquid (water + 50% Paraflu11)</b> |
| Active net power       | Kwm  | <b>300</b>                            |
| Nominal net power      | CV   | <b>407,6</b>                          |
| Cycle                  | Tipo | <b>4 strokes</b>                      |
| Injection              | Tipo | <b>Direct</b>                         |
| Aspiration             | Tipo | <b>Turbo</b>                          |
| Numbers of cylinders   | N    | <b>6</b>                              |
| Cylinders arrangement  |      | <b>L</b>                              |
| Bore                   | mm   | <b>135</b>                            |
| Stroke                 | mm   | <b>150</b>                            |
| Total displacement     | lt   | <b>12,876</b>                         |
| Engine oil features    |      | <b>15W40-API CI-4/CH-4 ACEA E5-E7</b> |
| Total oil capacity     | lt   | <b>35</b>                             |
| Total coolant capacity | lt   | <b>67</b>                             |

## Alternator

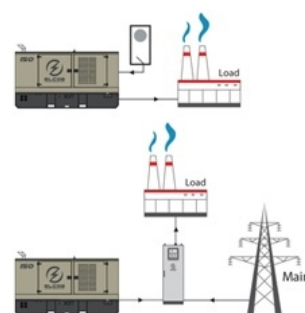
**\* May vary based on stock availability. However, a primary brand will be used.**

|                                      |       |                              |
|--------------------------------------|-------|------------------------------|
| Factory                              |       | <b>Stamford</b>              |
| Model                                |       | <b>S4L1D-E</b>               |
| Single-phase range                   | KVA   | <b>360</b>                   |
| Voltage regulator (voltage accuracy) | +/- % | <b>1</b>                     |
| Poles                                | N°    | <b>4</b>                     |
| Phases                               | N°    | <b>3+N</b>                   |
| Standard windings connection         |       | <b>Star Series</b>           |
| Stator/rotor impregnation            |       | <b>H (Outdoor Temp 40°C)</b> |
| Efficiency                           | %     | <b>93,3</b>                  |
| Engine coupling                      |       | <b>Elastic disk</b>          |
| Short circuit current                |       | <b>&gt;= 300% (3In)</b>      |
| Protection degree                    | IP    | <b>23</b>                    |
| Cooling system                       |       | <b>Self ventilating</b>      |
| Maxium overspeed                     | rpm   | <b>2250</b>                  |
| Waveform distortion                  | %     | <b>&lt;5</b>                 |
| Exciter                              |       | <b>Diode bridge</b>          |

## Standard operating environmental conditions

|                     |    |             |
|---------------------|----|-------------|
| Ambient temperature | °C | <b>25</b>   |
| Relative humidity   | %  | <b>30</b>   |
| Max altitude        | mt | <b>1000</b> |

# Control Systems on board QLE-A-SC-3F-V1



operating scheme - schema di funzionamento

## QLE Multifunction panel without switching on board

The QLE command and control panel offers outstanding protection, monitoring and control for small and middle size generator sets. Elcos's control module MC2 offers advanced features to meet the most demanding on-site application. Elcos's control module MC2 is designed for offer an easy user interface. Variant with transfer switch on board. Switching made with a pair of contacts electrically and mechanically interlocked. The output line is protected by a breaker which protects from overload, short circuit.

### Mechanical features

|                   |    |    |
|-------------------|----|----|
| Protection degree | IP | 55 |
|-------------------|----|----|

### Battery charger

|                                |             |         |
|--------------------------------|-------------|---------|
| Model                          | ELCOS - CB1 |         |
| Maximum output current         | A           | 2,5     |
| Output dc voltage (selectable) | Vdc         | 12-24   |
| Input ac voltage (selectable)  | Vac         | 220-260 |
| Frequency                      | Hz          | 50-60   |

### Remotable functions in terminal box

|                                     |                                    |
|-------------------------------------|------------------------------------|
| Gs start                            | Gs lock                            |
| Genset contactor close/open command | Mains contactor close/open command |
| Common alarm - volt free output     | Common alarm - dc output           |
| Gs test without load                |                                    |

## Control Module



|                |           |
|----------------|-----------|
| Brand          | ELCOS     |
| Model          | MC2       |
| Operating mode | AMF - MRS |

## Specifics

### Applications

Emergency to the mains  
Stand-alone

### ENGINE MEASURES

Fuel tank level %  
Total run time  
Battery voltage  
Battery charging voltage  
Start-ups counter  
Engine speed

### ALTERNATOR MEASURES

Generator voltage I1, I2, I3  
Generator voltage I1-n, I2-n, I3-n  
Generator frequency

### MAINS MEASURES

Mains voltage I1, I2, I3  
Mains voltage I1-n, I2-n, I3-n  
Mains frequency

### COMMUNICATION PORTS

Configurable via pc using usb port

### EQUIPMENT

Microprocessor logic  
Back-lit display  
Programmable by pc software  
10 event log  
Icons management  
Stop button  
Start button  
Aut mode button  
Reset alarm button

### PRE-ALARMS/ ALARMS

Common alarm  
Fuel reserve (pre-alarm)  
Low fuel level (alarm)  
Charge alternator failed (dinamo)  
Low oil pressure (alarm)  
High coolant temperature (alarm)  
Battery undervoltage  
Gs failure to start  
Gs failure to stop  
Genset overvoltage  
Genset undervoltage  
Genset high frequency  
Genset low frequency  
Maintenance request  
Emergency button pressed  
Genset negative phase sequence

### VISUALIZATIONS ON CONTROL MODULE/DISPLAY

Pre-alarms  
Alarms  
Engine measures  
Alternator measures  
Mains measures  
Operating mode  
Genset status  
Mains status  
Mains contactor status  
Genset contactor status

### CONTROL MODULE FUNCTIONS

Automatic start and stop when the mains fails (7)  
Remote start and stop  
Manual start and stop  
Emergency stop button on panel board  
Remote emergency stop  
Remote lock

## OPTIONAL

### ⚙️ Fuel Supply



**O.G-ACO-AT-CI-02**

External tank connections for supply only from external tank (g without tank) GE 130/700



**O.G-ACO-BT-P3700-1000**

600 Lt Oversized Fuel Tank on board for BF/PRO (180/250 kVA) (Increased weight and size)



**O.G-ACO-BT-P3700-600**

1000 Lt Oversized Fuel Tank on board for BF/PRO (180/250 kVA), (Increased weight and size)



**O.G-ACO-ST-BG-ES2**

"Easy" automatic fuel refilling system on board, controlled by QST2 for QLE panel

### ⚙️ Batteries



**O.G-BAT-BAE-03**

Maintenance free high efficiency starter batteries (130/250 kVA)



**O.G-BAT-STB-02**

Battery isolator lockable(130/700 kVA)

### ⚙️ Electrical on board



**O.Q-QLE-K-DIF-M2**

Adjustable differential protection only for MC2 controller for Gen Sets 50/250 kVA



**O.Q-QLE-QBM-COM-AMF25**

Additional price for QBM COMAP AMF25 panel replacing the standard QLE-A.



**O.Q-QLE-QBM-DSE-7320**

Additional price for QBM DSE7320 panel replacing the standard QLE-A.



**O.Q-QLE-QPE-MC4**

Additional price for QPE-C panel with MC4 replacing the standard QLE-A.

### ⚙️ Engine



**O.G-MOT-K-40C-03**

Engine liquids suitable for -40°C ambient temperature for Gen Sets 130/250 kVA



**O.G-MOT-PO-02**

Oil change pump for Gen Sets 130/700 kVA



**O.G-MOT-SC-AC-EL-01**

Engine pre-heater 230V with thermostat on board for Gen Sets 10/100 kVA + 130/250 PRO version



**O.G-MOT-SC-AC-EL-03**

Super hot engine heater 230V with thermostat on board for Gen Sets 130/250 kVA

### ⚙️ Handling



#### O.G-MOV-GC-S2700

Lifting hook (150/250 kVA) PRO Version

#### ⚙️ ATS Panels

#### QLTS.250A

Wall-mounted ATS switching panel 250A 4P (275 kVA 400V - 160 kVA 230V) Dim. 80 x 28 x 60 cm - 40 kg.

#### ⚙️ Test



#### MS.CP-LT-02

FAT - Factory Acceptance Test for single Gen Set from 130 to 400 kVA according to our standard procedures in Elcos factory (max 2 hours - max 4 people - max 1 hour of operation)



#### MS.CP-SP-02

FAT - Factory Acceptance Test for single custom Gen Set from 130 to 400 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-02

FAT - Factory Acceptance Test for single Gen Set from 130 to 400 kVA according to our standard procedures in Elcos factory (max 4 hours - max 4 people - max 2 hour of operation)

## 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

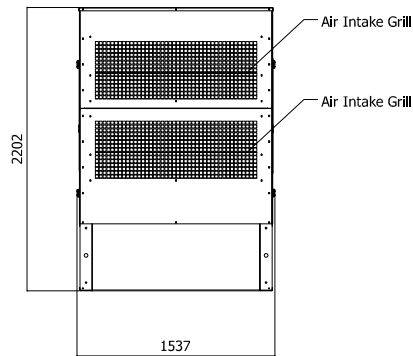
## LTP

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.

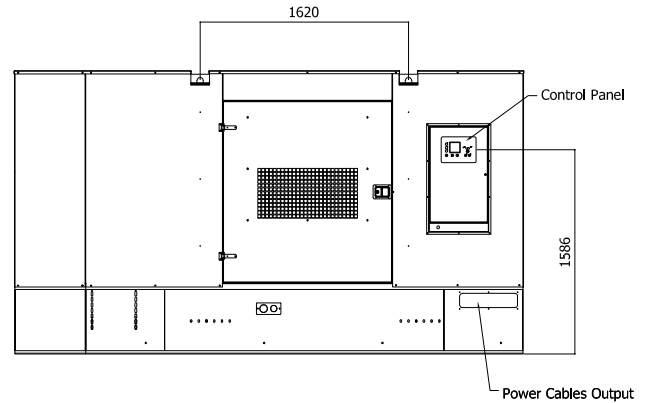
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|--------|---------|-----|---------------|---|-------|----------|------|----|--------------|------------|----------|
| Sheet: | PRO3950 | PRO | Exhaust side: | - | Type: | STANDARD | Rev: | 00 | Last Update: | 15-05-2020 | Page 1/2 |
|--------|---------|-----|---------------|---|-------|----------|------|----|--------------|------------|----------|

## OVERALL DIMENSIONS [mm]

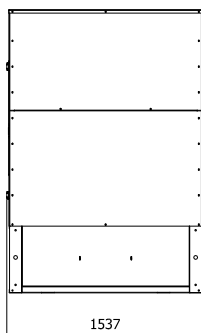
REAR VIEW



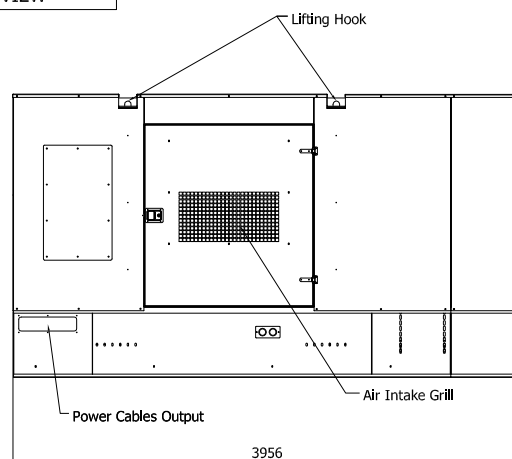
LEFT SIDE VIEW



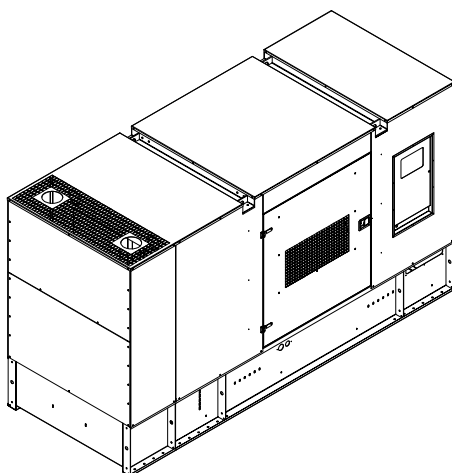
FRONT VIEW



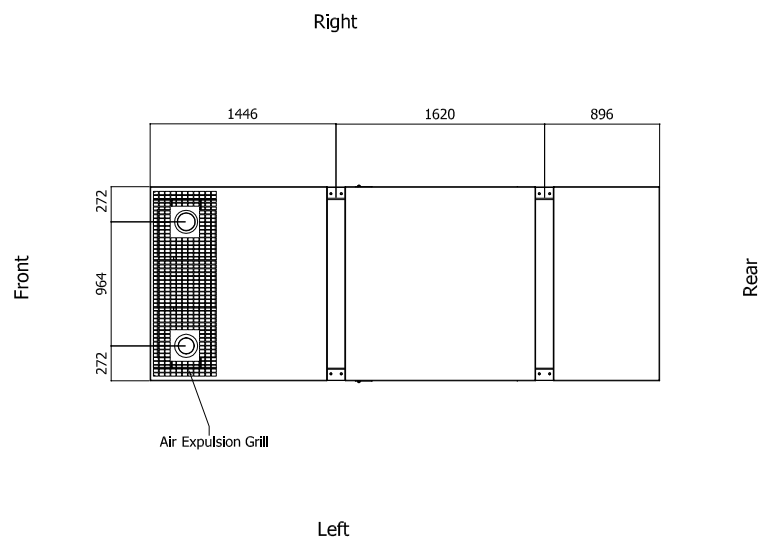
RIGHT SIDE VIEW



3D VIEW



TOP VIEW

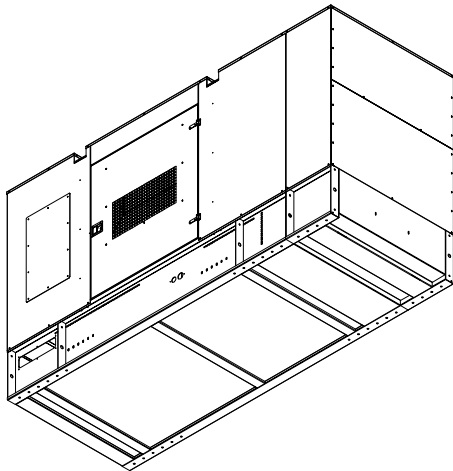


### IMPORTANT:

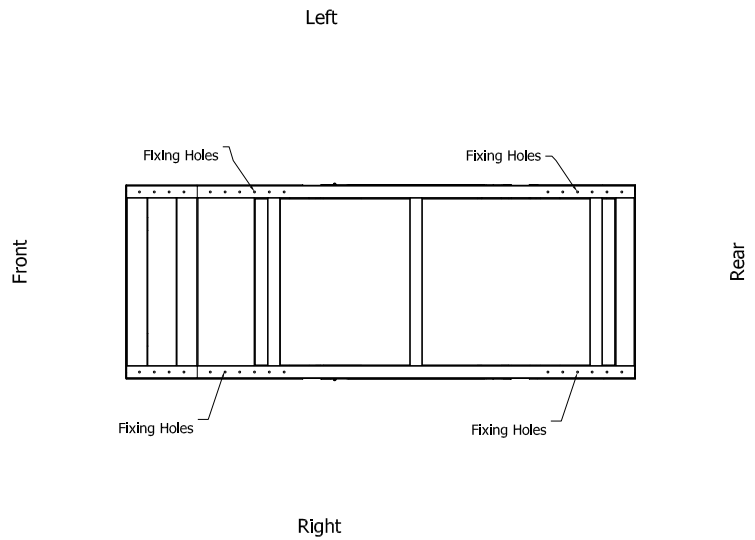
- 1) Form and dimension refer to the generating set on catalogue
- 2) Form and dimension are subject to change in order to update or improve the products
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|        |         |     |               |       |          |      |    |              |            |          |
|--------|---------|-----|---------------|-------|----------|------|----|--------------|------------|----------|
| Sheet: | PRO3950 | PRO | Exhaust side: | Type: | STANDARD | Rev: | 00 | Last Update: | 15-05-2020 | Page 2/2 |
|--------|---------|-----|---------------|-------|----------|------|----|--------------|------------|----------|

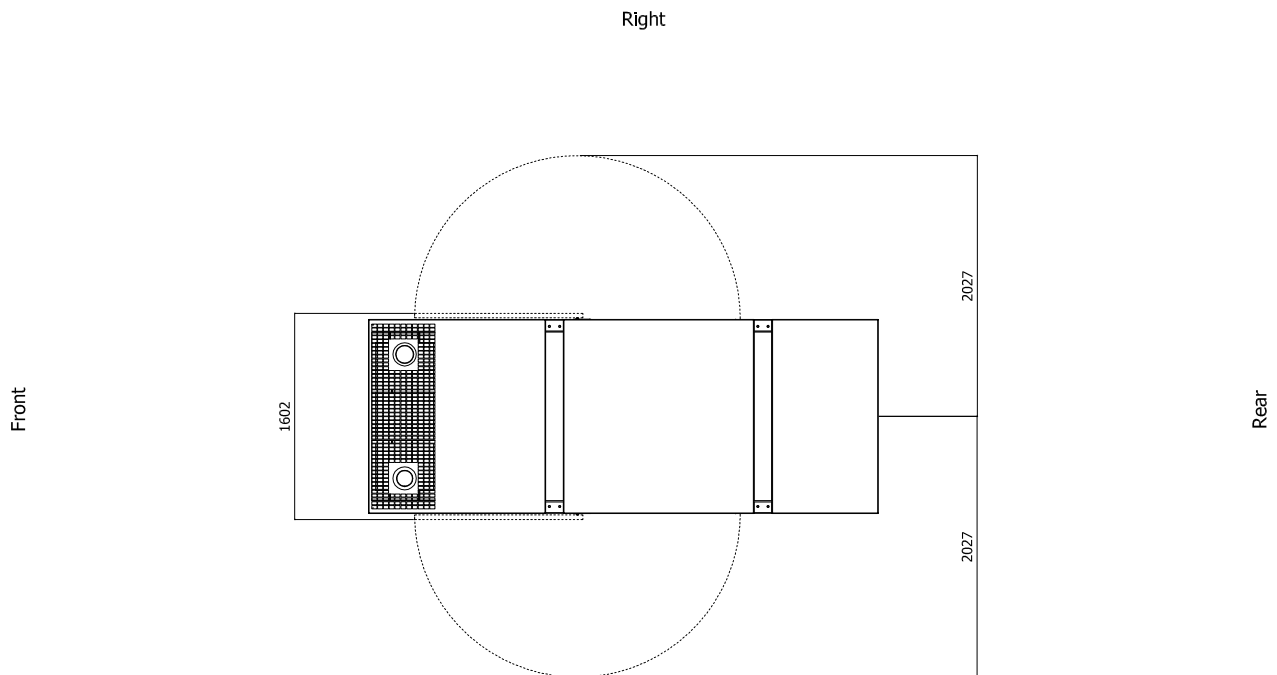
### 3D BOTTOM VIEW



### 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: 0.90 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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