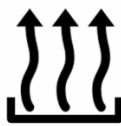




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Image for demonstration purposes



**Generating Set**  
RENTAL BUILDING - Diesel

**GE.SCS5.500/450.RB+014**

1500 rpm - Trifase - 50Hz - 400V  
Synchronising control panel between Gen-sets



## Standard equipment

### ⚙️ Canopy Soundproofing

Soundproofing with class 1 polyester material  
Handles with key lock and automatic closing  
Special baffles for air intake and air expulsion  
Inspection doors with hermetic gasket  
Automatic doorstop  
Externally and internally washable with sprayer

### ⚙️ Exhaust

Residential exhaust system -35dB(A)  
Exhaust rain cap

### ⚙️ Fuel Supply

Single wall daily tank with 110% bunded base  
Plug & Play fuel connections  
Bulk tank connections with 3 way valve  
Automatic shutdown system for low fuel level  
Fuel gauge  
Mechanical fuel gauge  
Increased fuel hatch for washing

### ⚙️ Handling

n.2 lifting hooks integrated into the bearing structure  
Rubber Bumpers

### ⚙️ 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  
Oil pressure and coolant temperature gauge (only with QPE or +14 variant)  
Oil change pump  
Engine liquids (oil and antifreeze)  
Tropicalized radiator  
Rotating parts protection  
Electronic speed governor  
Battery disconnecter lockable  
Radiator level sensor

### ⚙️ Alternator

AVR Automatic Voltage Regulator  
AVR Pre-arranged for parallel  
Impregnation for marine environment  
IP23

### ⚙️ Panel & connection

Emergency Stop button  
Tamperproof panel IP55  
Male socket for battery charger and engine pre-heater (if provided) power supply  
Cable output from side  
IP44 wiring  
Start-up battery (pre-charged)  
Plug & Play connector for Bus communication between controller (Only variant +14)  
Sockets module with magnetothermal circuit breaker and Differential  
Grounding point  
Total power terminal box (excluded variant +12)

### ⚙️ Documentation

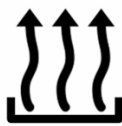
CE conformity declaration  
User and Maintenance manual  
Test report  
Wirings diagrams  
IP 55 Document pocket  
Exploded drawing with spare parts codes

### ⚙️ 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



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## Primary data

### General Information

Speed	RPM	<b>1500</b>
Frequency	Hz	<b>50</b>
PRP	KVA	<b>450</b>
PRP - Prime power	KW	<b>360</b>
LTP - Standby power	KVA	<b>495</b>
LTP - Standby power	KW	<b>396</b>
Standard Voltage	V	<b>400/230</b>
Current	A	<b>650,29</b>
Voltage for current calculation	V	<b>400</b>
COSFI	0,8	<b>0,8</b>

### General electrical protection

Rated current	A	<b>800</b>
Type	<b>Magnetothermal switch on panel board</b>	
Poles	N	<b>4P</b>
Optional/notes	<b>Motorized</b>	

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

LWA	dB(A)	<b>93</b>
Sound pressure level @ 7 mt	dB(A)	<b>68</b>
Sound pressure level @ 1 mt	dB(A)	<b>77</b>

### Fuel Consumption

TYPE	<b>Diesel</b>	
Standard Fuel Tank capacity	lt	<b>1150</b>
Autonomy @ 75% load	h	<b>20</b>
Fuel consumption at 100% load	lt/h	<b>78</b>
Fuel consumption at 75% load	lt/h	<b>60</b>
Fuel consumption at 50% load	lt/h	<b>40</b>

### General data

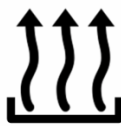
Rated capacity	Ah	<b>2x120</b>
Auxiliary Voltage	V	<b>24</b>
Exhaust gas temperature	°C	<b>423</b>
Exhaust diameter	mm	<b>200</b>

### Weight and Dimensions

Dimensions (L x W x H)	cm	<b>475x185x250</b>
Weight with liquids (excluding optionals and fuel)	Kg (+/-3%)	<b>5276</b>



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## Engine

Factory		<b>Scania</b>
Model		<b>DC13 320A 02-63</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>385</b>
Nominal net power	<i>CV</i>	<b>523</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>6</b>
Cylinders arrangement		<b>L</b>
Bore	<i>mm</i>	<b>130</b>
Stroke	<i>mm</i>	<b>160</b>
Total displacement	<i>lt</i>	<b>12.73</b>
Engine oil features		<b>15W40-API CI-4/CH-4 ACEA E5-E7</b>
Total oil capacity	<i>lt</i>	<b>36</b>
Total coolant capacity	<i>lt</i>	<b>45</b>

The emission levels of the exhaust gas are indicated in the engine technical datasheet. Any changes due to more restrictive regulatory adjustments are excluded.

## Alternator

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

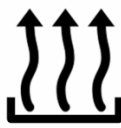
Factory		<b>Stamford</b>
Model		<b>S4L1D-G</b>
PRP continuous power	<i>KVA</i>	<b>450</b>
Voltage Regulator (voltage accuracy)	<i>+/- %</i>	<b>1</b>
Poles	<i>N°</i>	<b>4</b>
Phases	<i>N°</i>	<b>3+N</b>
Standard windings connection		<b>Star Series</b>
Stator/rotor impregnation		<b>H (Outdoor Temp 40°C)</b>
Efficiency	<i>%</i>	<b>93,3</b>
Engine coupling		<b>Elastic disk</b>
Short circuit current		<b>&gt;= 300% (3In)</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>

## Standard operating environmental conditions

Ambient temperature	°C	<b>25</b>
Relative Humidity	<i>%</i>	<b>30</b>
Max altitude	<i>mt</i>	<b>1000</b>



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# Control Systems on board QPA-PAR-3F-V1RB

## QPA Synchronising control panel between Gen-sets

The QPA control panel controls and manages the synchronisation between gensets. The module can be synchronised with up to 32 generators within the same system. Automatic remote start, synchronisation with others gensets and load sharing, load shedding controls. The module includes USB port, USB host, Can-bus communication port, Modbus RS-485 communication port.

### Mechanical features

Protection degree	<i>IP</i>	<b>55</b>
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### Battery charger

Model		<b>ELCOS - CB1</b>
Maximum output current	<i>A</i>	<b>2,5</b>
Output DC voltage (selectable)	<i>V<sub>dc</sub></i>	<b>12-24</b>
Input AC voltage (selectable)	<i>V<sub>ac</sub></i>	<b>220-260</b>
Frequency	<i>Hz</i>	<b>50-60</b>

### Sockets module

Protection	<i>Type</i>	<b>Differential Magnetothermal breakers</b>
Sockets		<b>N. 1 CE Schuko 16A 230V</b>
Sockets		<b>N. 1 CE 2P+T 16A 230V</b>
Sockets		<b>N. 1 CE 3P+N+T 16A 400V</b>
Sockets		<b>N. 1 CE 3P+N+T 32A 400V</b>
Sockets		<b>N. 1 CE 3P+N+T 63A 400V</b>
Male socket		<b>N. 1 CE 2P+T 16A 230V</b>

### Data Communication

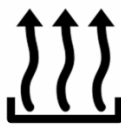
Data connection port		<b>RS-485</b>
Communication protocol		<b>Mod-bus RTU-8N1</b>

### Remotable functions in terminal box

GS start	Common Alarm - DC output
Remote horn - DC output	Genset running
Genset ready to start - DC output	Motorized GCB close/open command
GCB feedback	Digital input available
Digital bus communication between controllers	Syncro Bus (Vac)



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## Control Module



### Specifics

#### Applications

Parallel  
Self-production

#### ENGINE MEASURES

Fuel tank level %  
Engine oil pressure BAR (1)  
Engine Coolant temperature °C (1)  
Total run time  
Partial run time  
Hours to maintenance  
Battery voltage  
Battery charging voltage  
Start-ups counter  
Engine speed  
Engine speed (2)  
Engine Oil temperature (2)  
Cooler temperature (2)  
Engine oil level (2)  
Engine coolant level (2)  
Engine coolant pressure (2)  
Turbo pressure (2)  
Fuel Consumption (2)

#### ALTERNATOR MEASURES

Generator Voltage L1, L2, L3  
Generator Voltage L1-N, L2-N, L3-N  
Generator frequency  
Generator current L1  
Generator current L1, L2, L3  
Generator Apparent Power kVA  
Generator Active Power kW  
Generator Reactive Power kVAR  
Generator accumulated power kWh  
Power factor Cosfi

#### MAINS MEASURES

Mains voltage L1, L2, L3  
Mains voltage L1-N, L2-N, L3-N  
Mains frequency

#### COMMUNICATION PORTS

Can-bus port  
RS485 port with Mod-bus RTU communication  
Configurable via PC using USB port

#### EQUIPMENT

Microprocessor Logic  
Back-lit display  
Programmable by PC software  
250 event log  
Multiple display languages  
STOP button  
START button  
AUT mode button  
MAN mode button  
OFF mode button  
Reset alarm button  
Alarm mute button  
Transfer to Mains button  
Transfer to generator button

#### PRE-ALARMS/ ALARMS

Common Alarm  
Fuel reserve (pre-alarm)  
Low fuel level (alarm)  
Tank overflow  
Charge alternator failed (dinamo)  
Low oil pressure (pre-alarm) (1)  
Low oil pressure (alarm)  
Oil sensor failed (alarm)  
High coolant temperature (pre-alarm) (1)  
High coolant temperature (alarm)  
Low coolant temperature (pre-alarm)  
Low water level (1)  
Water in fuel (1)  
Battery undervoltage  
Battery overvoltage  
GS failure to start  
GS failure to stop  
Can-bus Failure  
No Can-bus communication  
Genset overload L1, L2, L3 phases  
Genset short circuit  
Genset overvoltage  
Genset undervoltage  
Genset high frequency  
Genset low frequency  
overspeed  
Reverse power  
Maintenance request  
Emergency button pressed  
Remote emergency active  
Fuel theft  
Genset negative phase sequence  
Mains negative phase sequence

#### VISUALIZATIONS ON CONTROL MODULE/DISPLAY

Pre-alarms  
Alarms  
Engine measures  
Alternator measures  
Mains measures  
Date and time  
Operating mode  
Genset status  
Mains status  
Mains contactor status  
Genset contactor status  
Digital Input and Output status

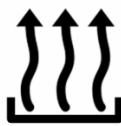
#### CONTROL MODULE FUNCTIONS

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  
MODBUS commands (Start, Stop, Reset, Test)  
Scada available with PC connected to the controller  
PLC editor  
Manual switching commands

Model	IntelGen200
Operating mode	GENSETS IN PARALLEL OPERATION



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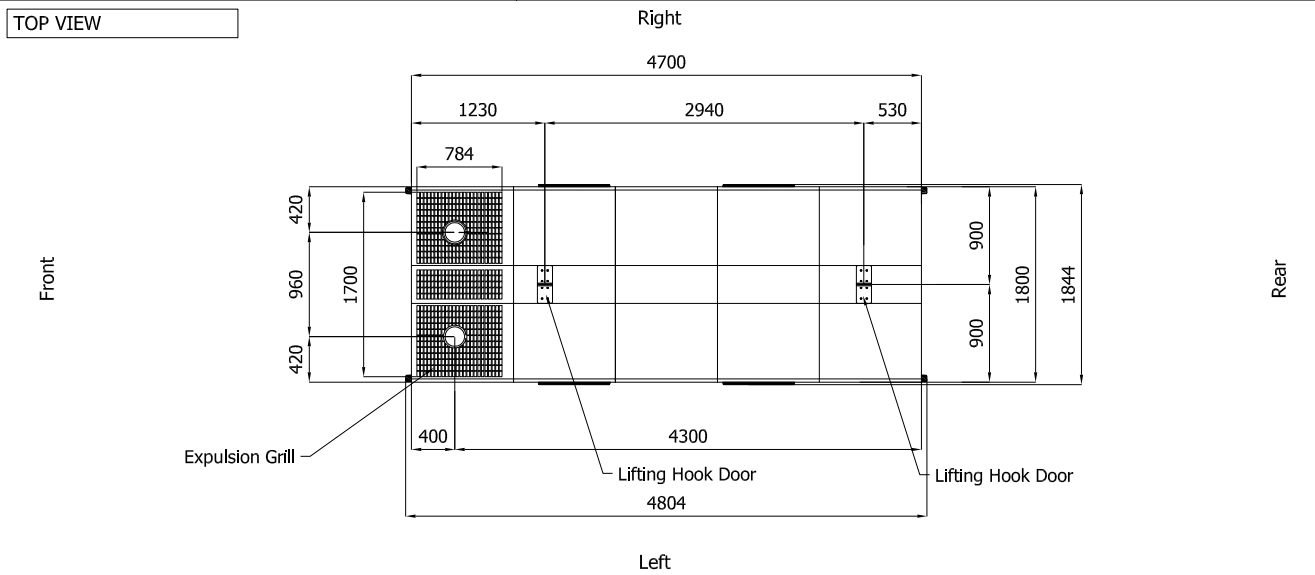
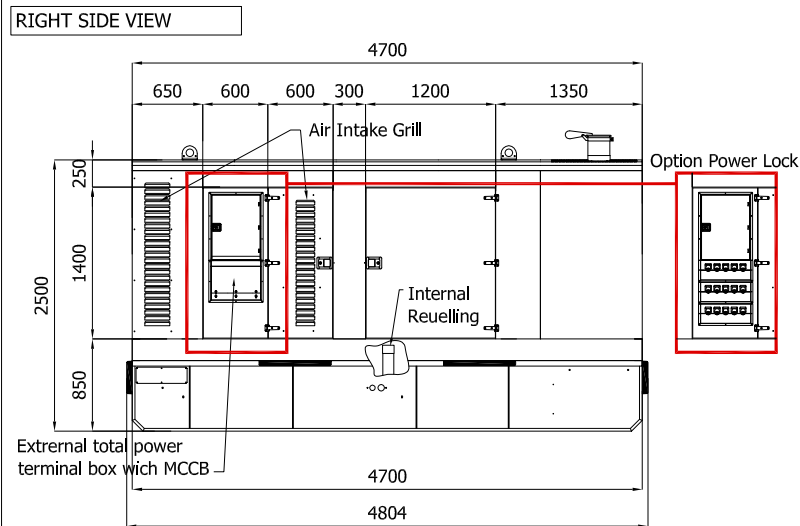
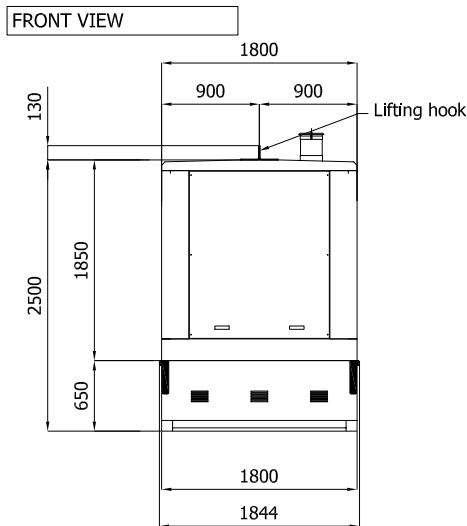
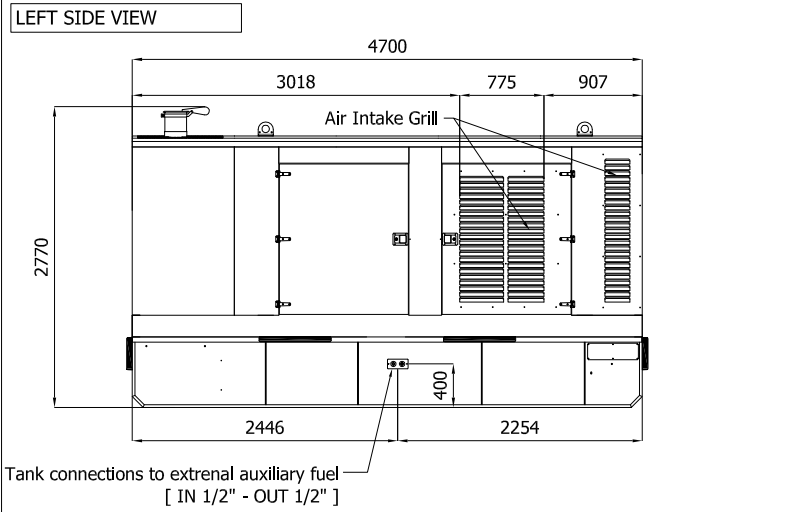
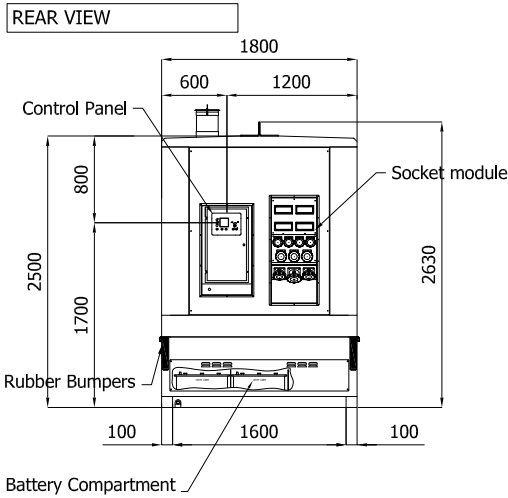
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**OVERALL DIMENSIONS [mm]**

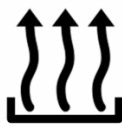


**IMPORTANT:**

- Form and dimension refer to the generating set on catalogue
- Form and dimension are subject to change in order to update or improve the products



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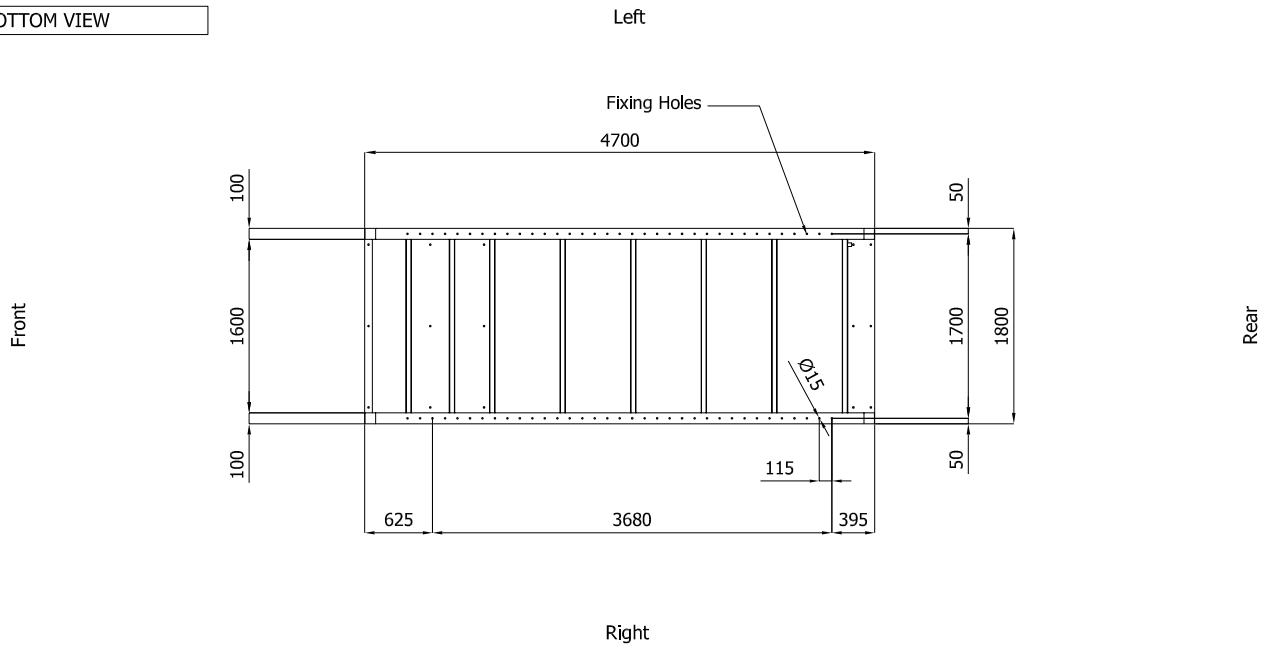
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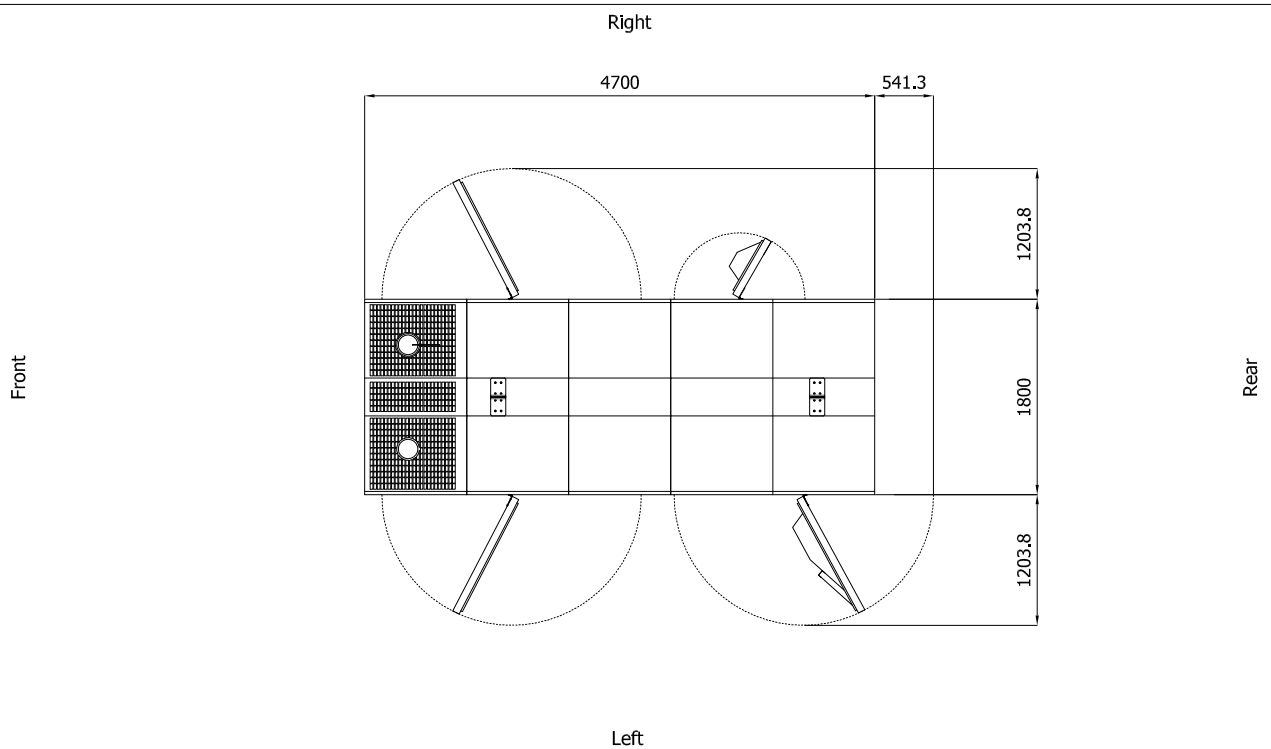
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Sheet:	C4700.RB	SUPER SILENT	Exhaust side:	Right	Type:	STANDARD	Rev:	00	Last Update:	Dec 05, 2018	Page 2/2
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**BOTTOM VIEW**



**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: 2.20m<sup>2</sup>  
 Expulsion: 1.60m<sup>2</sup>  
 ATTENTION: for a correct ventilation the expulsion air and the exhaust gas needs to be conveyed in the open-air

- 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