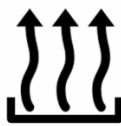




STROM



WÄRME



KÄLTE



LICHT



USV



Image for demonstration purposes



Generating Set
RENTAL BUILDING - Diesel

GE.SCS5.385/350.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

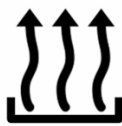
CE conformity declaration
User and Maintenance manual
Test report
Wirings diagrams
IP 55 Document pocket
Exploded drawing with spare parts codes

⚙️ 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



STROM



WÄRME



KÄLTE



LICHT



USV

Primary data

General Information

Speed	RPM	1500
Frequency	Hz	50
PRP	KVA	350
PRP - Prime power	KW	280
LTP - Standby power	KVA	385
LTP - Standby power	KW	308
Standard Voltage	V	400/230
Current	A	505,78
Voltage for current calculation	V	400
COSFI	0,8	0,8

General electrical protection

Rated current	A	630
Type	Magnetothermal switch on panel board	
Poles	N	4P
Optional/notes	Motorized	

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	1150
Autonomy @ 75% load	h	23
Fuel consumption at 100% load	lt/h	68,6
Fuel consumption at 75% load	lt/h	51,5
Fuel consumption at 50% load	lt/h	35,7

General data

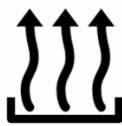
Rated capacity	Ah	2x120
Auxiliary Voltage	V	24
Exhaust gas temperature	°C	451
Exhaust diameter	mm	200

Weight and Dimensions

Dimensions (L x W x H)	cm	475x185x250
Weight with liquids (excluding optionals and fuel)	Kg (+/-3%)	5102



STROM



WÄRME



KÄLTE



LICHT



USV

Engine

Factory		Scania
Model		DC13 320A 02-61
Emissions stage		Stage 5
Speed governor		Electronic
Radiator	°C	50
Cooling	Tipo	liquid (water + 50% Paraflu11)
Active net power	Kwm	300
Nominal net power	CV	407,6
Cycle	Tipo	4 strokes
Injection	Tipo	Direct
Aspiration	Tipo	Turbo
Numbers of cylinders	N	6
Cylinders arrangement		L
Bore	mm	130
Stroke	mm	160
Total displacement	lt	12,736
Engine oil features		15W40-API CI-4/CH-4 ACEA E5-E7
Total oil capacity	lt	36
Total coolant capacity	lt	37

Alternator

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

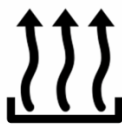
Factory		Stamford
Model		S4L1D-E
PRP continuous power	KVA	360
Voltage Regulator (voltage accuracy)	+/- %	1
Poles	N°	4
Phases	N°	3+N
Standard windings connection		Star Series
Stator/rotor impregnation		H (Outdoor Temp 40°C)
Efficiency	%	93,3
Engine coupling		Elastic disk
Short circuit current		>= 300%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

Standard operating environmental conditions

Ambient temperature	°C	25
Relative Humidity	%	30
Max altitude	mt	1000



STROM



WÄRME



KÄLTE



LICHT



USV

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	IP	55
-------------------	----	----

Battery charger

Model		ELCOS - CB1
Maximum output current	A	2,5
Output DC voltage (selectable)	V _{dc}	12-24
Input AC voltage (selectable)	V _{ac}	220-260
Frequency	Hz	50-60

Sockets module

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

Data Communication

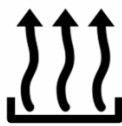
Data connection port		RS-485
Communication protocol		Mod-bus RTU-8N1

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)



STROM



WÄRME



KÄLTE



LICHT



USV

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

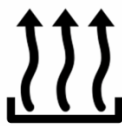
CONTROL MODULE FUNCTIONS

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



STROM



WÄRME



KÄLTE



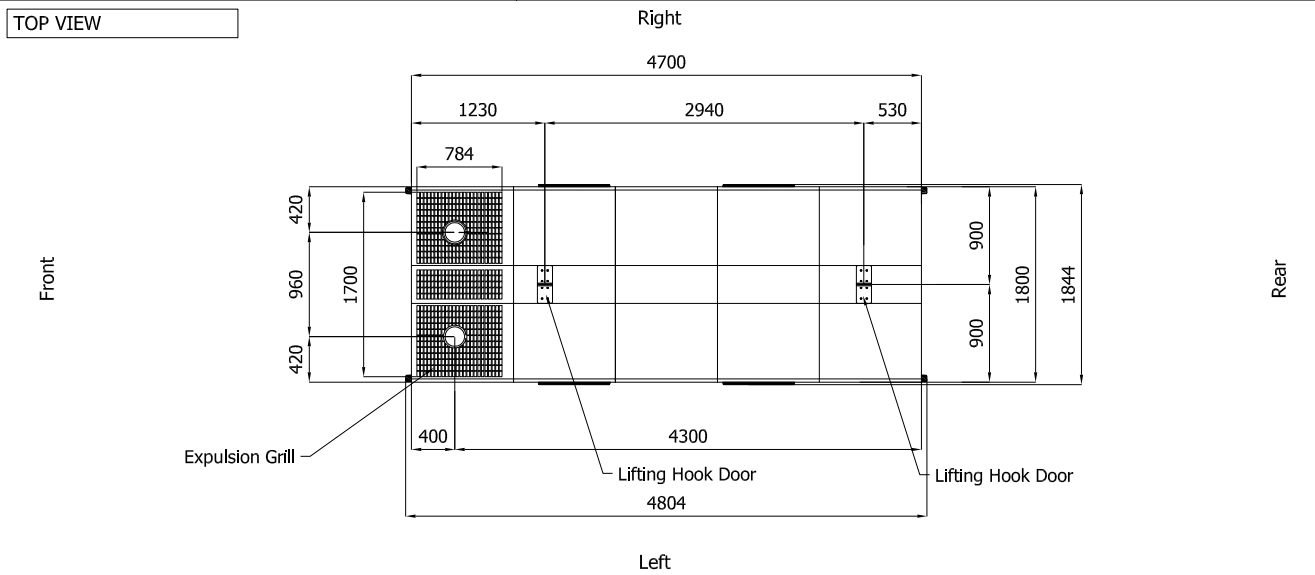
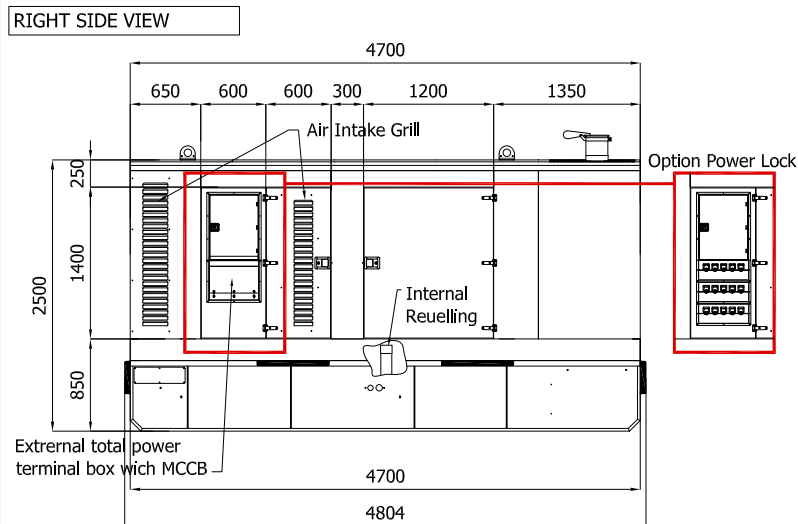
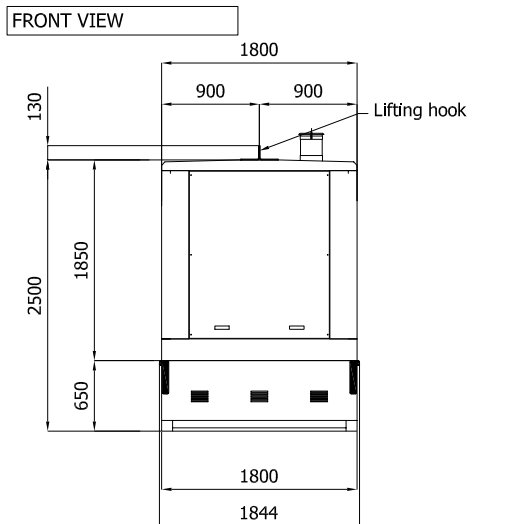
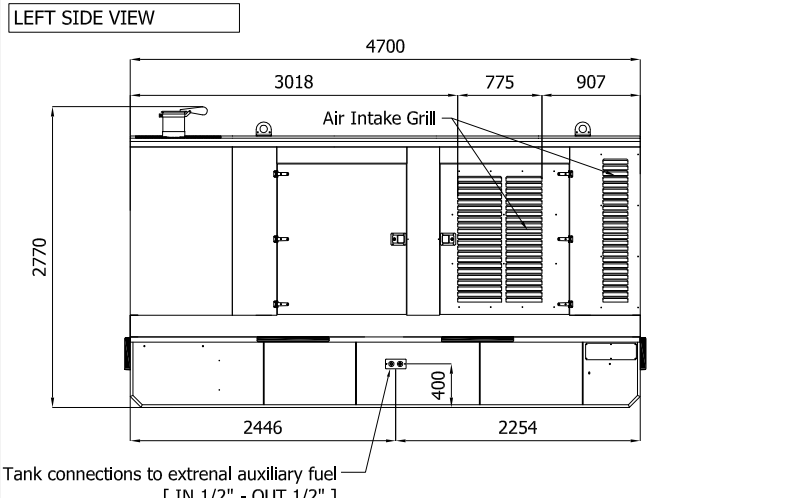
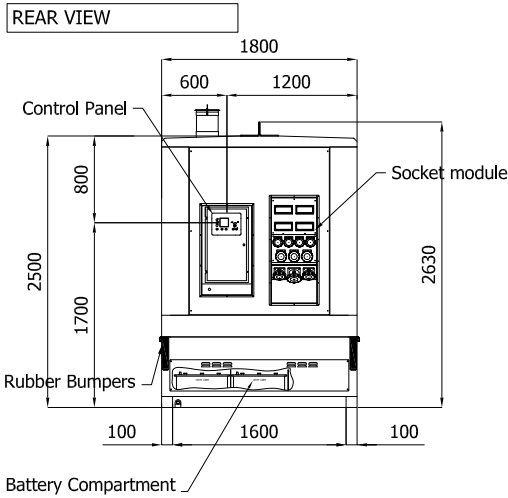
LICHT



USV

Sheet:	C4700.RB	SUPER SILENT	Exhaust side:	Right	Type:	STANDARD	Rev:	00	Last Update:	Dec 05, 2018	Page 1/2
--------	----------	--------------	---------------	-------	-------	----------	------	----	--------------	--------------	----------

OVERALL DIMENSIONS [mm]

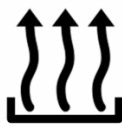


IMPORTANT:

- 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



STROM



WÄRME



KÄLTE



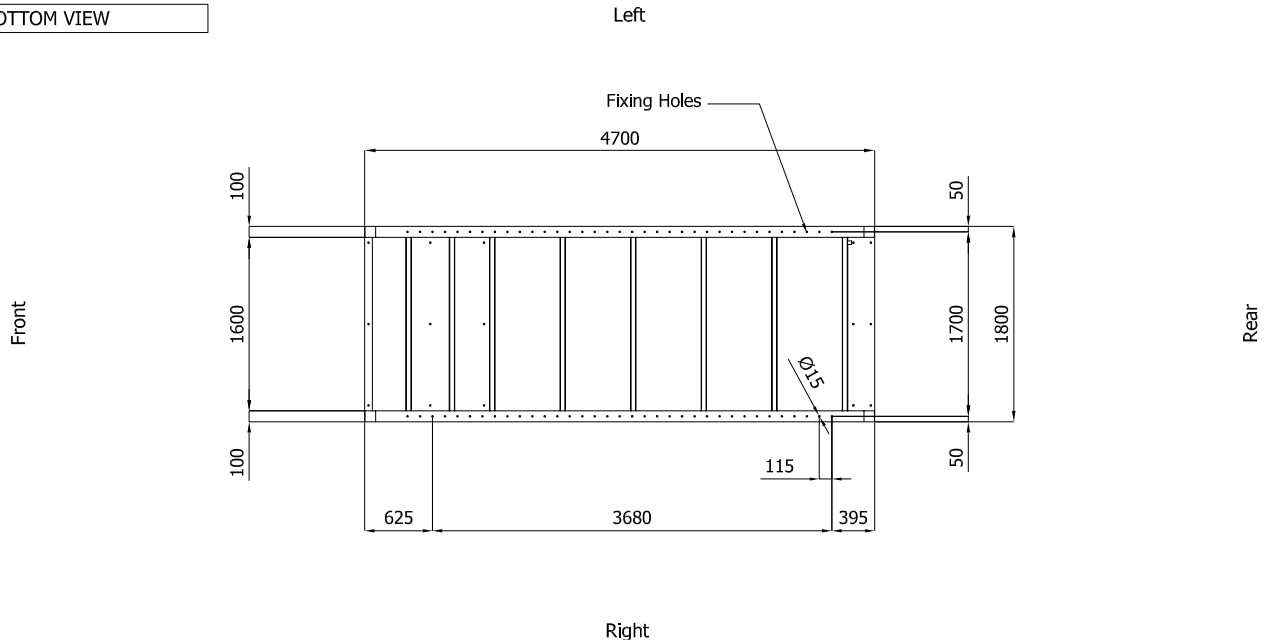
LICHT



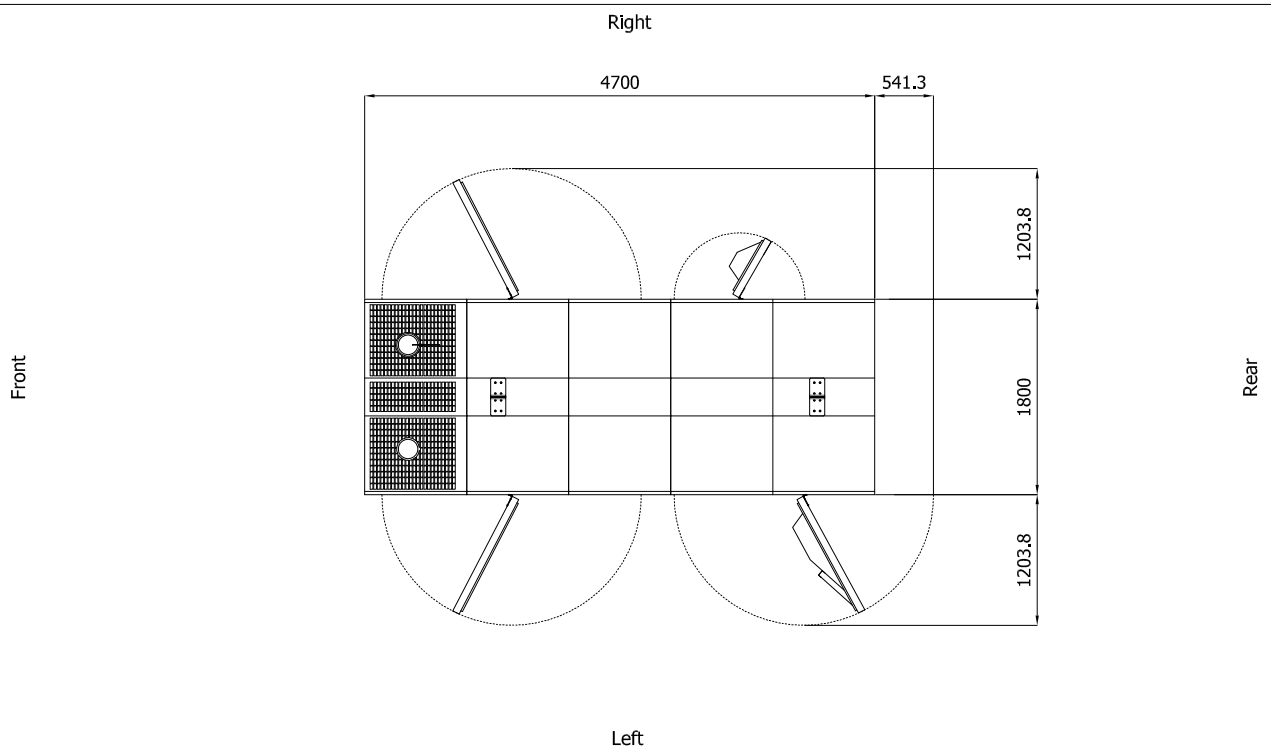
USV

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

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: 2.20m²
 Expulsion: 1.60m²
 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