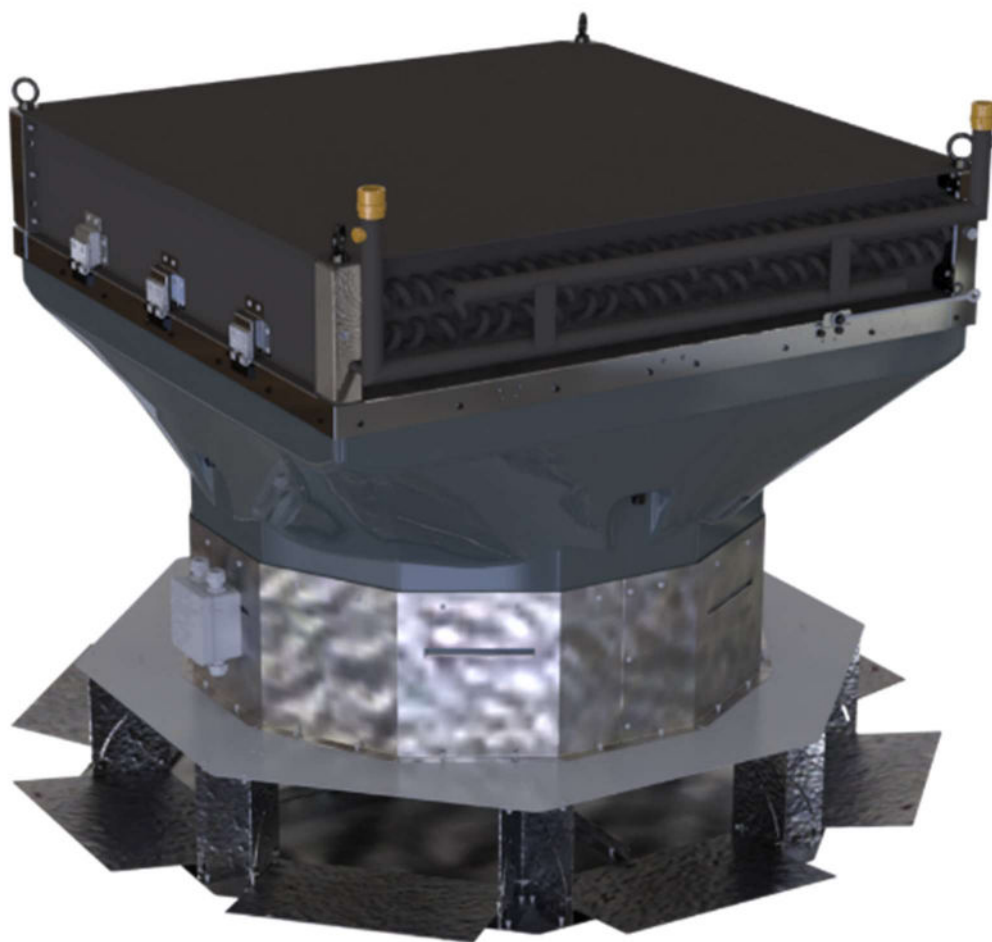


AEC80

User Manual



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SYSTEL® 
Heating mastermind

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Figures

Figure a

Clutter

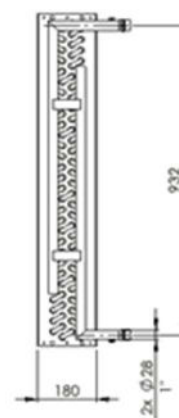
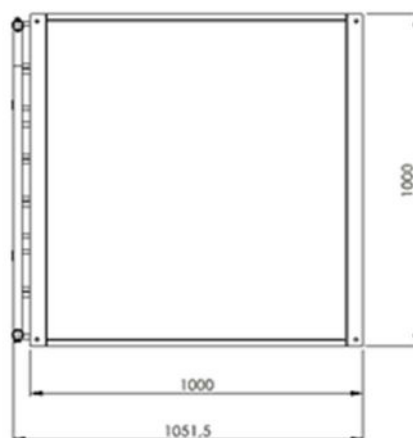
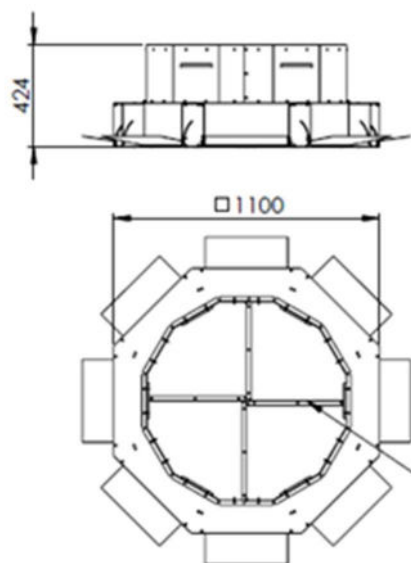
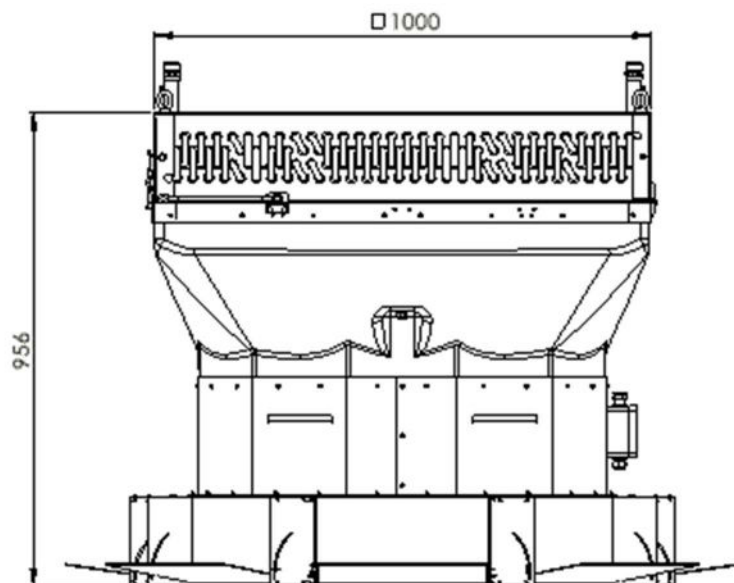
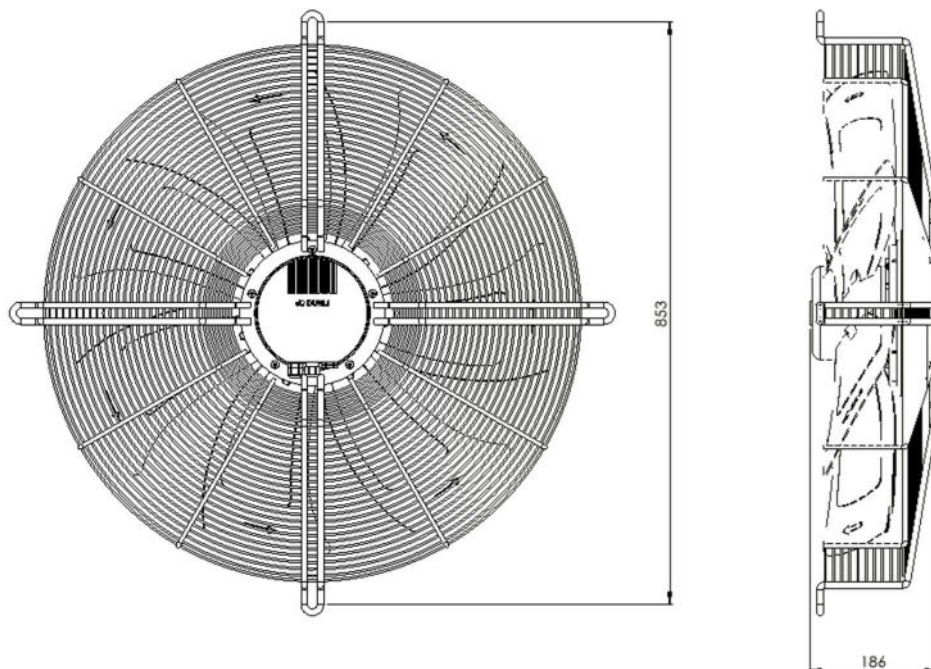
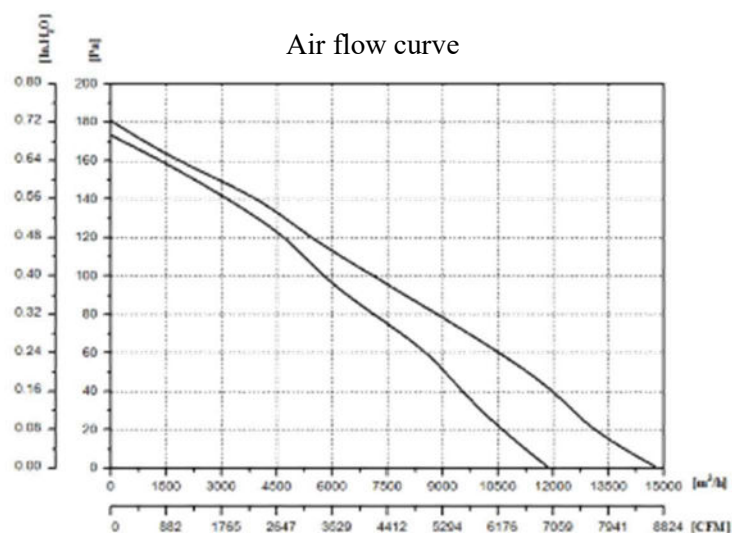


Figure b

Fan



Tension (V)	Frequency (Hz)	Intensity(A (±16%))
1 - 230	50/60	4.15



Air flow (m³/h)	Recovery temperature (°C)	Power (KW)	Temperature of the outgoing air (°C)	Water pressure (KPa)	Water flow (m³/h)
8000	10	90	42	50	4
8000	15	82	45	43	3.6
10000	10	104	40	66	4.6
10000	15	95	43	56	4.2
10000	30	67	50.5	30	3
10000	32	64	51.5	27.6	2.8
11000	10	111	39	74	4.9
11000	15	101	42	62.5	4.5

Figure c

Wiring

Power		
Signal	Color	Specification
L	Brown	AC230V 50/60Hz
N	Blue	AC230V 50/60Hz
PE	Green / Yellow	Earth

Progressive control		
Vsp	Yellow	0-10V / PWM
GND	Black	Earth

Everything or nothing control		
Vcc	Red	+10V
Vsp	Yellow	0-10V / PWM

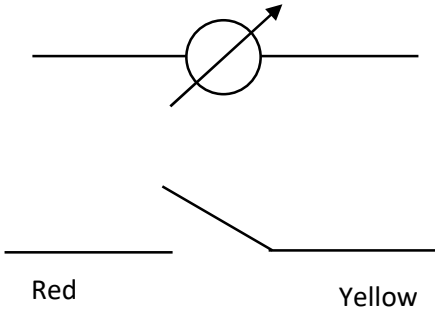
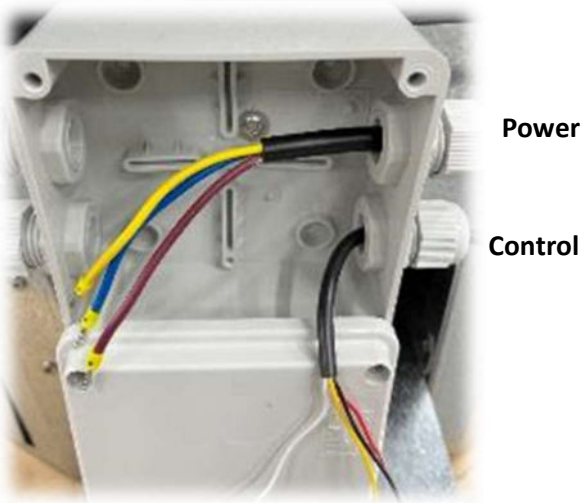
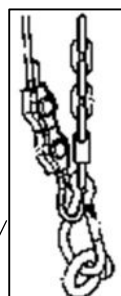


Figure d

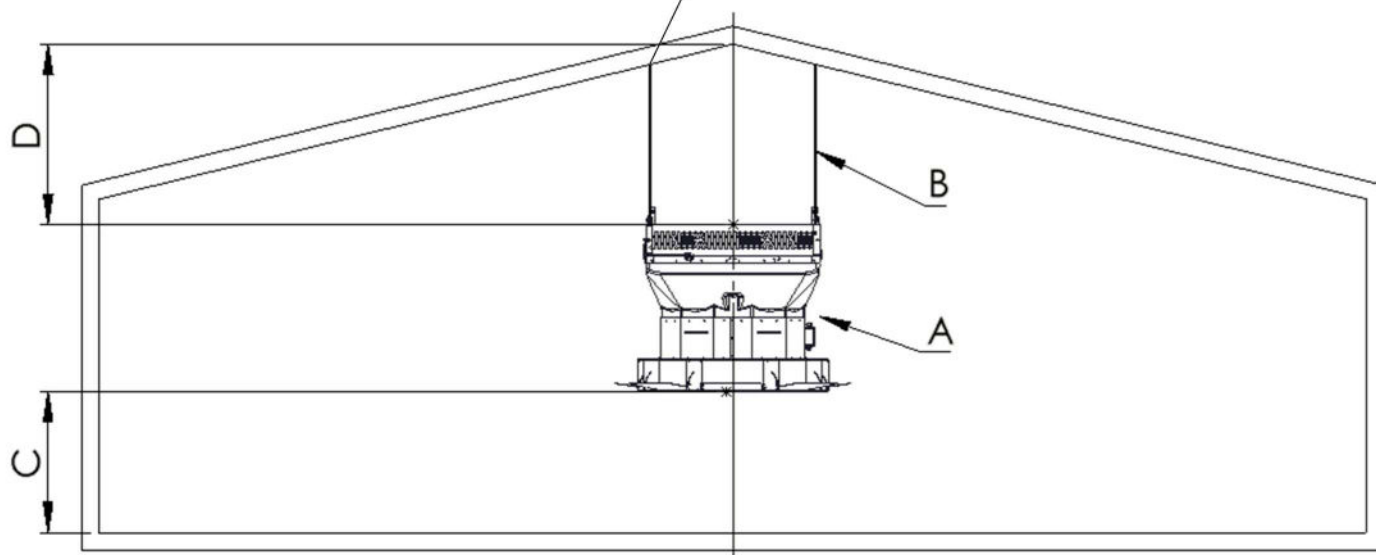
Implantation

Rep	Designation
A	Air heater
B	Suspension chains
C	0.5m mini
D	1m mini
E	Length of building

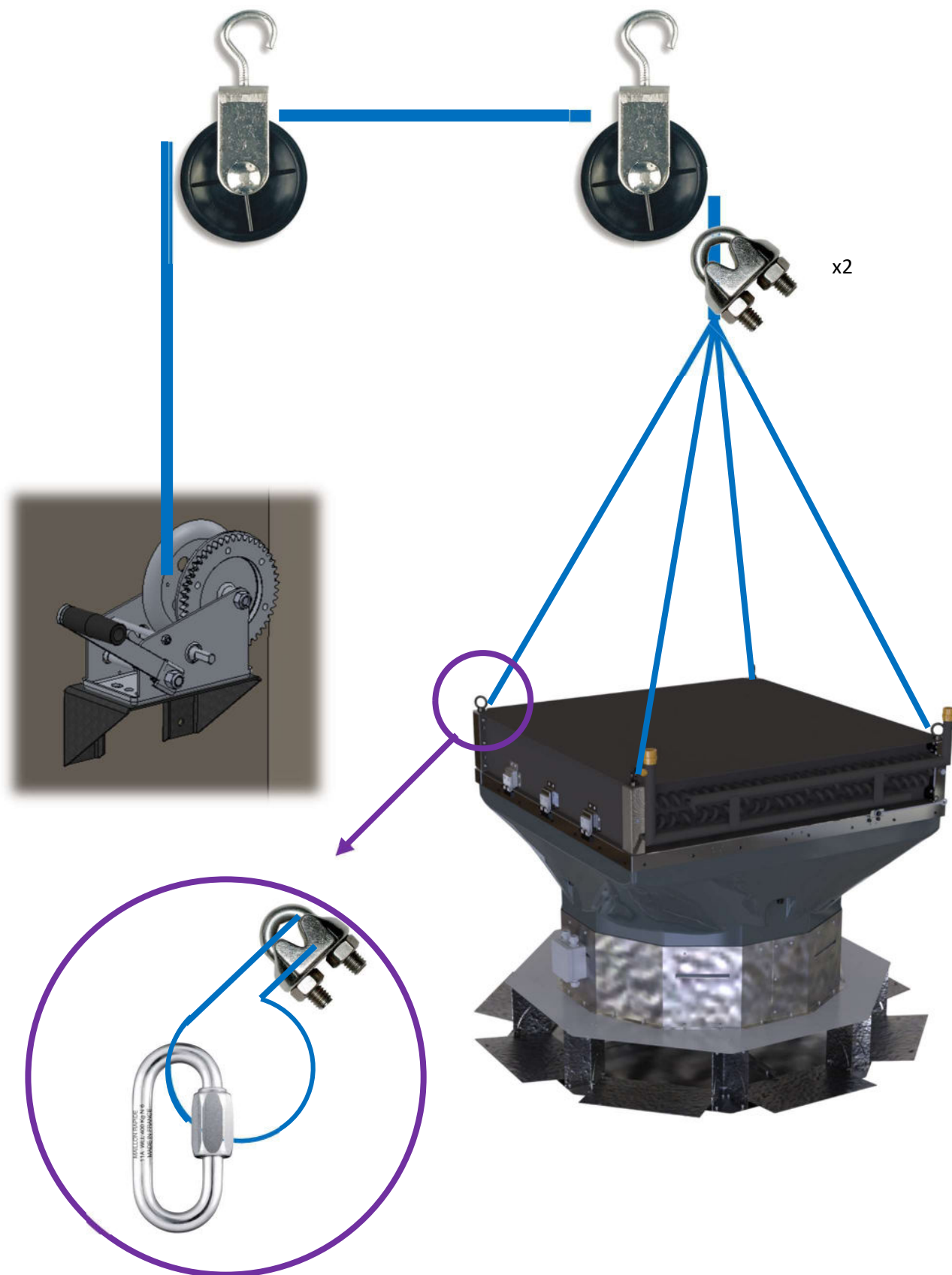
Air heater in the centre of the building
1m mini distance in width

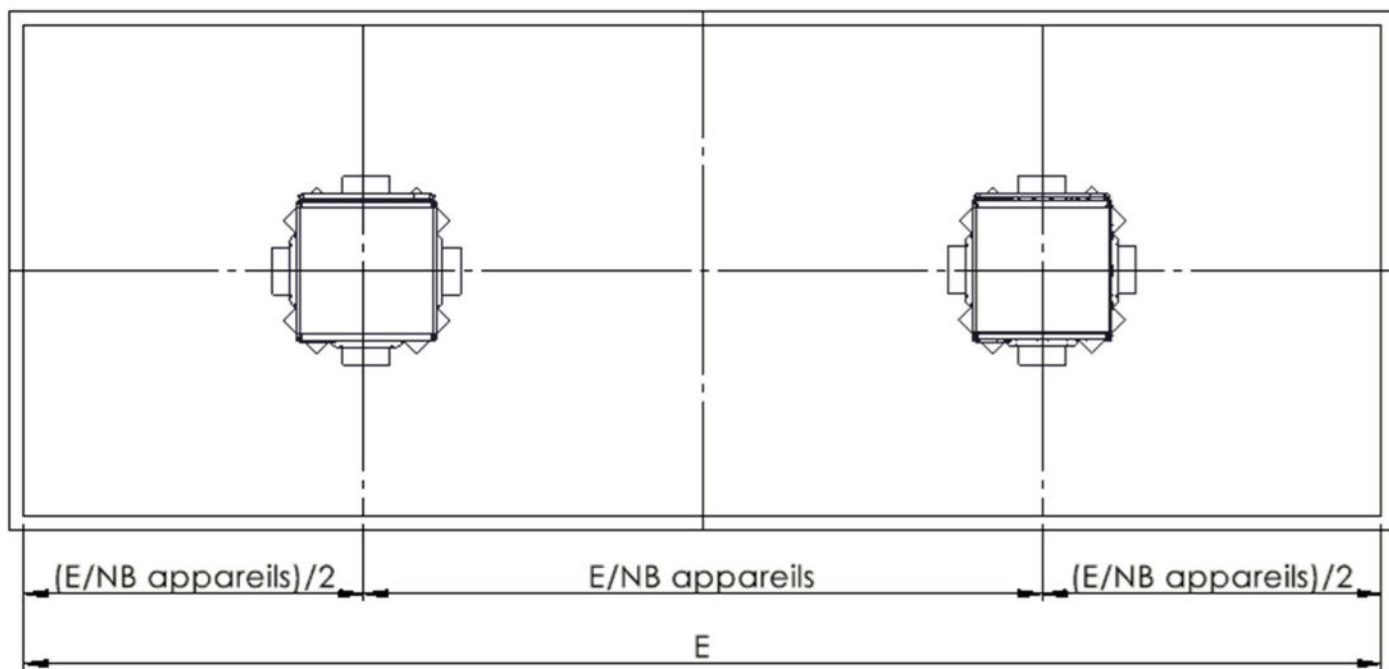


Nor provided
Chain
Hoist cable
Cable clamp
Carabiner

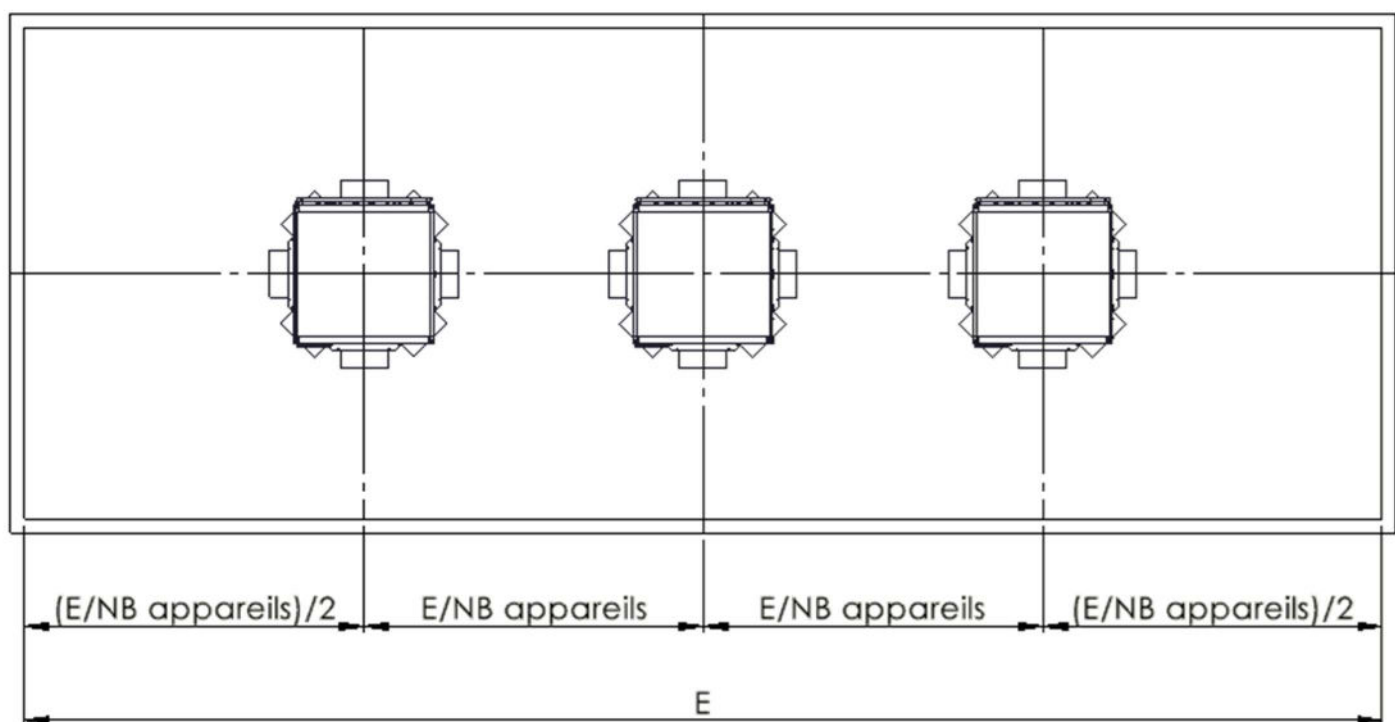


FACE VIEW





TOP VIEW
2 devices



TOP VIEW
2 devices

Figure e

Assembly

Rep	Designation	Code
A	Fan	VTEC710AEC80
B	Polyester shell	A1119511A
C	Hinge	CHNO5063
D	Coverall	GRNCAPO
E	Battery	BA80KWNNU
F	Electric box	BT100X100

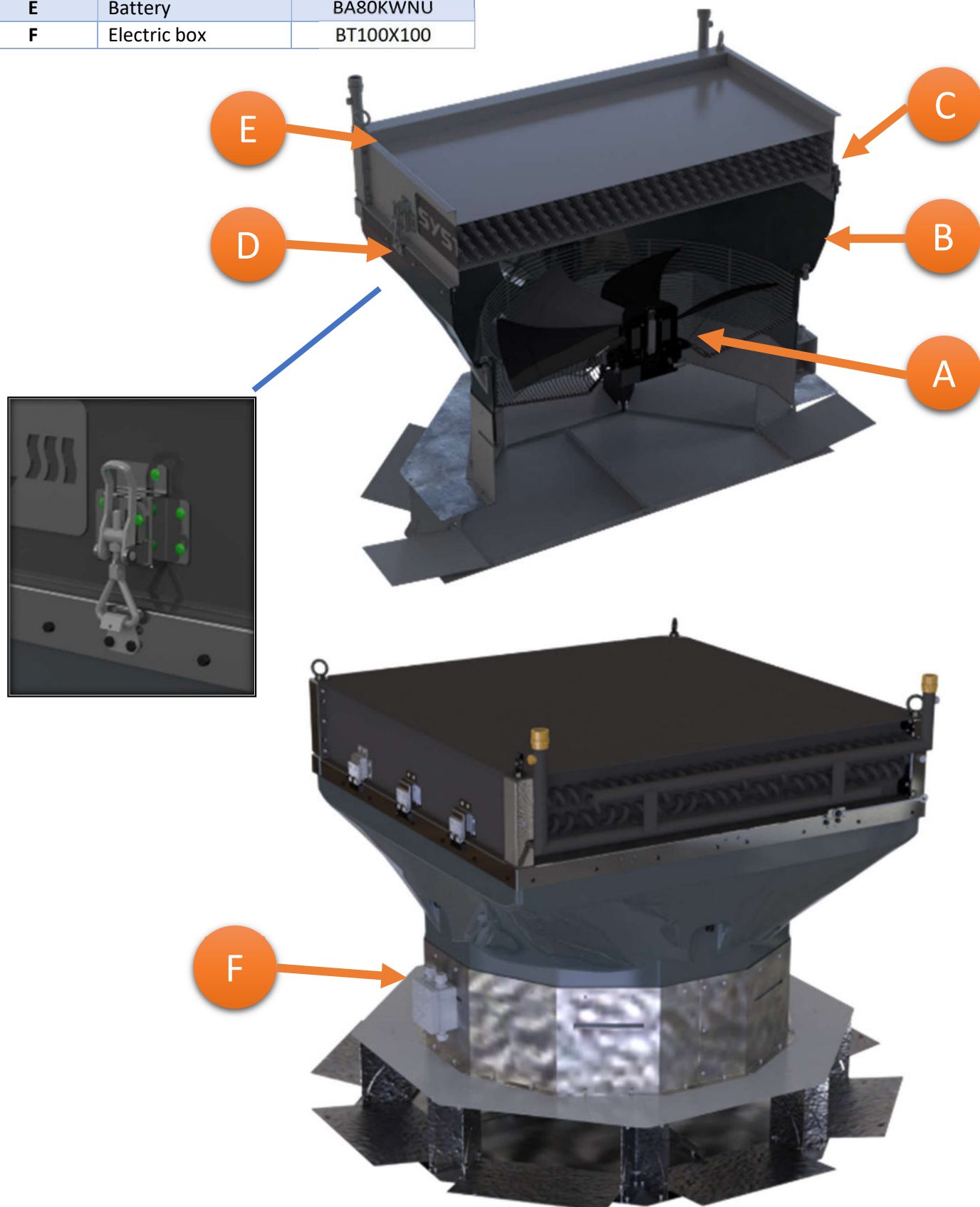


Figure f

Subassemblies

Rep	N°	Designation
A	A119520	Sub. Battery
B	A119510	Sub. Shell
B	A119530	Sub. Deflector



Figure g

A – SUB. BATTERY

Rep	N°	Description	Qty
6	A119521	Coverall support	2
7	A119522	Hinge support	3
8	A119523	Battery Booster right	4
9	A119524	SYSTEL logo	1

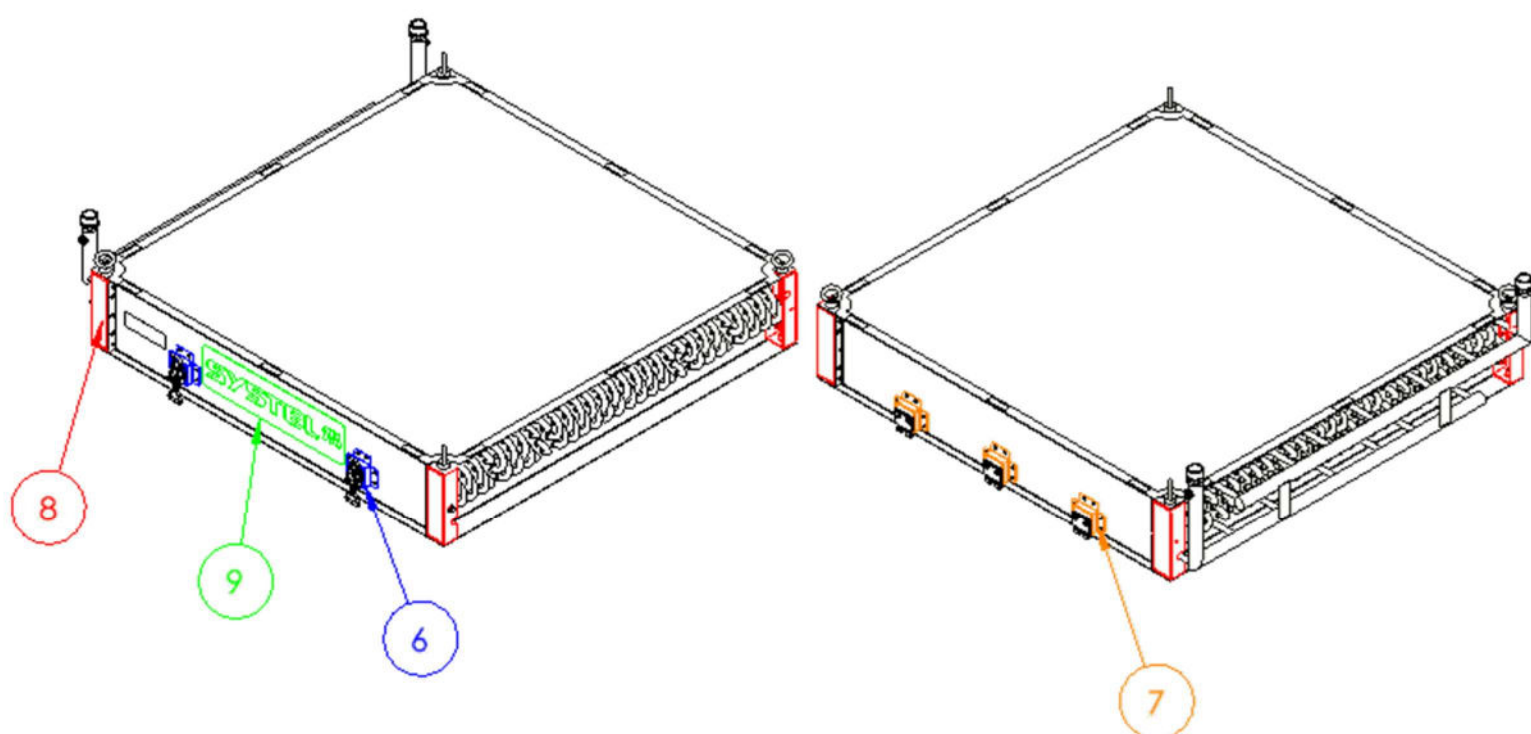


Figure h

B – SUB. SHELL

Rep	Code	Désignation	Qte
3	A119511	Shell	1
4	A119512	Outside angle	4
5	A119513	Inner angle	4
6	A119514	Locking	2
7	A119516	Corner	4

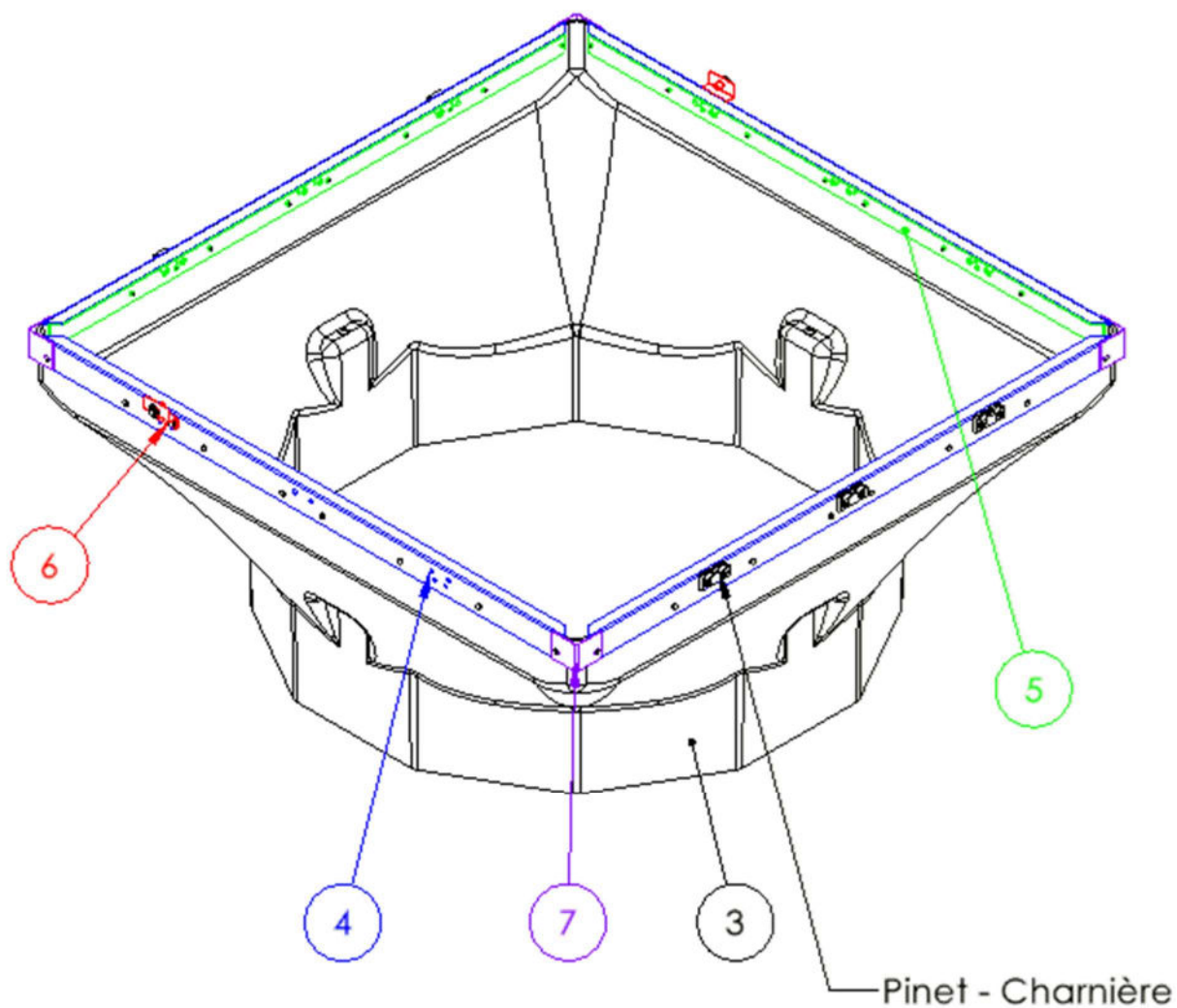


Figure i

C - ENS. DÉFLECTEUR

Rep	N°	Designation	Code	Qty
3	A119531	Strut		2
4	A119532	Bottom mouth		1
5	A119533	Angle		4
6	A119534	Shutter		8
7	A119536	Upper mouth		1
8	A119538	Connection		8

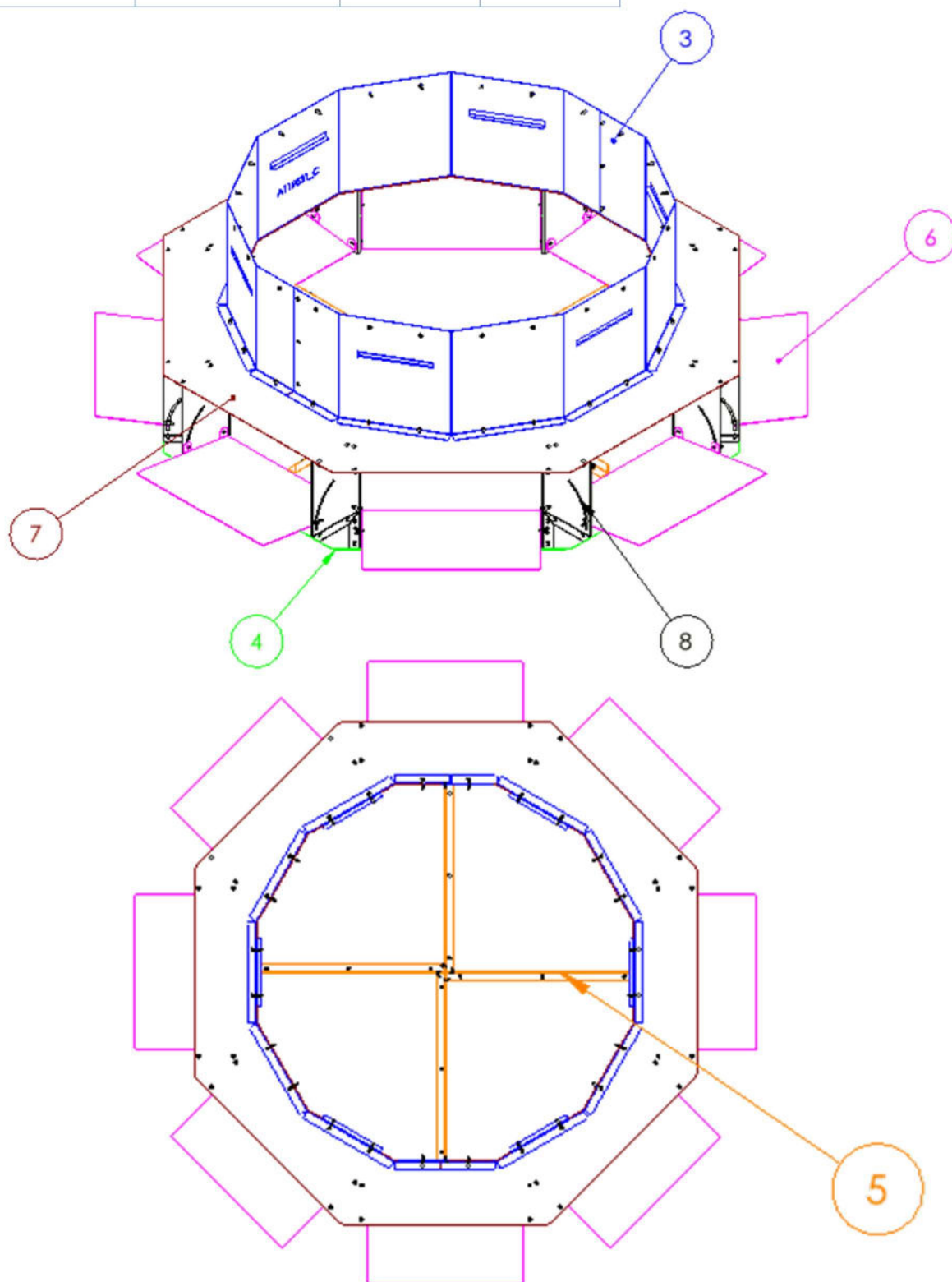


Figure j

Cleaning



DO NOT APPLY PRESSURE MAXI 3BARS

1. USE AND RETENTION OF MANUAL

Thank you for purchasing our hot water heater.

Our French designed and manufactured device has been designed, assembled and rigorously controlled to bring you maximum satisfaction.

SYSTEL develops a range of products and accessories for heat generation, lighting, energy savings, visit our website to discover these innovative products:

www.systel-international.com.

In order to improve its products, SYSTEL reserves the right to make without notice any modifications it deems useful to the products described in this document.

This document contains sections in French and translated sections. In case of dispute, the French language sections will be used.

Measurements are in metric units. The correspondences to other measurement systems (notably Anglo-Saxon) are given for information only.

Illustrations are not contractual.

2. WARNING

The longevity of this device and its performance will be optimal if its use and maintenance are ensured according to the rules of art and the regulations in force. It is therefore essential to read the instructions in this notice carefully.

Before installing the device, it is necessary to check that the local distribution conditions (type, voltage, power, flow...) are compatible with the setting of the device.

Installation, adjustment and eventual conversion require the intervention of a qualified installer.

The manufacturer must be consulted before replacing any parts other than those specified in the package leaflet.

It is the responsibility of the installer, after setting up and checking that the installation complies with the requirements of this notice.

a) User information

- The user cannot make changes to the design of the devices and the installation; any minor change (exchange, removal...) of safety components or parts affecting the performance of the device leads systematically to the removal for the device of the CE marking, the withdrawal of warranties from the manufacturer.
- The required cleaning and maintenance is essential.

b) Hand out the leaflet

SYSTEL, with the agreement of the notifying body of the CE marking, reserves the right to update this technical notice.

Only the notice accompanying the product when it is shipped can be considered as contractual.

Please keep this manual and all accompanying documents at hand for reference when needed.

We disclaim all liability for damages caused by failure to comply with the instructions in this document.

c) Prescriptions and safety

The **AEC80** hot water heater can be dangerous if not properly maintained and used. Read this manual carefully, especially the safety notes and instructions.

Failure to follow the safety instructions in this manual may incur your liability in case of an accident.

The warnings and precautions in this manual may not cover all risks associated with using the device.

In addition to the given messages, it is important to exercise common sense and respect basic safety principles.

d) Prescriptions

Follow the following safety instructions and requirements:

- Do not use or store explosive or flammable materials (for example, gasoline, paint, etc...) in the room where the appliance is located.
- Do not use the appliance within one hour of cleaning.
- Do not deactivate the safety devices and do not attempt to manipulate them, as this could result in a malfunction.
- Do not make any changes to the device.
- Do not make any changes to the environment of the device.
- Do not make any changes to the air, gas and electricity lines.
- Do not break or remove seals on components.
- Only SYSTEL After-Sales Service professionals are allowed to make changes to the sealed components.
- Do not modify the technical and architectural conditions in the vicinity of the appliance, as they may affect the safe operation of the appliance.
- It is imperative to fix the device by its mounting system, any other system is prohibited.

3. DESCRIPTION AND OPERATION

AEC80 is a hot water heater for livestock heating.

It is a progressive or ON/OFF type and works with hot water (optimal 80°C/60°C).

See figure c

It is controlled via a dry contact or 0/10V signal. The power of this heater depends on its water regime, room temperature and air flow.

a) Description of the device

- 1 hot water painted battery.
- 1 x EC diameter 710 single phase fan.
- 1 polyester shell.
- 1 diffuser in galvanized steel with 8 adjustable air outlets.
- 1 waterproof case to connect power and control of the device.

b) Instructions of use

- For the use, ordering and maintenance of this heater, please read the instructions in this brochure.
- A maintenance between each band is mandatory. It is also necessary to check regularly that there are no deformations of the apparatus: support, hydraulic connections, various pipes.
- Check regularly that the air inlet of the appliance is not obstructed.
- Check that the warm air can circulate normally in the building and in particular that there is no obstacle in front of the device's blowing mouth.

c) Operation

When heat demand is created by the building's ambient control, the fan starts with a speed more or less fast (depending on the 0/10V signal), the ambient air of the building passes through the hot water battery and is therefore heated, then the air is sent into the building at different locations depending on the setting of the diffusion mouth.

When the set temperature is reached, the fan stops until the next heat demand.

d) Shut

To stop the heater for a short period, simply send a minimum instruction (on the computer or thermostat that manages the heating).

For a prolonged shutdown, send a minimum instruction to the heater, wait about forty seconds until the fan stops completely. The hot water valves can then be closed and the power supply to the electrical panel cut off.

4. TECHNICAL CHARACTERITICS

The power of **SYSTEL** hot water heaters depends on several parameters:

- Water regime 80/60
- Air flow
- Return temperature

See figure b

5. DIMENTIONAL CHARACTERISTICS

Dimensions are in mm.

Weight	AEC80
Empty weight	107 kg
Weight with water	120 kg

See figure a

6. ASSEMBLIES AND PARTS

See figure e, f, g, h, i

7. REGULATIONS

a) Orders, standards, directives

When installing and operating the appliance, the current version of the regulations, directives, technical rules, standards and provisions must be complied with.

It is also the installer's responsibility to comply with the regulations specific to the type of room.

b) Recycling

The device is made up largely of recyclable materials.

The packaging, the device and the contents of the package must not be disposed of with household waste but must be disposed of in accordance with current regulations.

c) Installation

The **AEC80** hot water heater is designed to work inside livestock buildings.

d) Position of the device

The device shall be mounted horizontally.

There shall be no obstructions in front of the air inlet or outlet.

Minimum distances from the walls: care shall be taken to ensure that there is a minimum clearance around the appliance so as to allow for proper air intake and maintenance.

See figure e

8. INSTALLATION OF THE AIR HEATER

Ensure that the structural elements of the building are well-suited to support the device and accessories.

The intended location for installation of the appliance shall have sufficient space around it to allow maintenance and to respect safety distances.

The appliance must be placed or suspended on a rigid support to avoid strain on water and electricity connections.

It is mandatory to install the device in a place that is protected from the weather (rain, snow, frost) and to check the closure of the electric cover and the sealers.

See figure d

Example of installation

The company **SYSTEL** can implant the devices according to a plan.

9. HYDRAULIC CONNECTION

The **AEC80** is connected to the hot water system via two 1 inch male connections.

The pressure and type of fluid used to feed the appliance shall be the same as indicated on the appliance's rating plate. Upstream of the installation it is important to provide a filter on the start to avoid any type of fouling on the air heaters. The water pipe must be adapted to the maximum flow rate necessary for the proper functioning of all devices.

A precise study should be carried out on the pipe diameters according to the nature, flow and length of the pipes. It is necessary to ensure that the losses of the pipes do not exceed 5% of the supply pressure.

The connections must be made in accordance with the requirements for indoor installations by qualified personnel who hold the necessary approvals.

After the water connection is made and before the first commissioning, it is imperative:

- Purge the network and check for possible leaks on this network.
- To control the mains distribution pressure and the air heater supply pressure.

10. ELECTRIC CONNECTION

The delivered device is fully wired according to the electrical diagrams on the following pages.

The device must be connected to a control cabinet with dry contact output, or 0/10V signal.

The electrical connection must be made according to the current standards (NFC 15-100) (conductor section, ground connection, sectionalizer, protection etc...) and in accordance with the electrical diagrams given on the following pages.

a) Supply voltage

The supply voltage is 230 volt single phase 50 hertz.

THE EARTH CONNECTION IS MADE THROUGH THE GREEN/YELLOW TERMINAL BLOCK PLACED IN THE JUNCTION BOX.

See figure c

11. ONGOING VERIFICATIONS

- For your safety, check that the hot air outlet is not blocked.
- For your safety, check that the air inlet (battery side) is not blocked.
- For your safety, check the quality and strength of the suspension elements.
- Check the fan grille for cleanliness.

12. PERIODIC MAINTENANCE AND CLEANING

- Before starting maintenance, cut off the water supply and after the turbine has stopped, turn off the power.
- Maintenance must be performed cold.
- Maintenance at least once per breeding period (band) is mandatory. However, the frequency of maintenance operations depends on the environment in which the device operates.
- Permanent inspection must be performed, in case of doubt or problem, please contact your authorized professional.

See figure j

13. OPERATING ANOMALIES

a) Fan does not turn on when starting.

What are the potential causes?

- The appliance is not powered on: check that the circuit breaker in the cabinet is up.
- The building control sends a heating tip too low.
- Check that the fan is properly powered.
- The fan is out of service.

Air coming out of the diffuser is cold

- There is air in the water piping
- Circulator not powered or out of service
- The water valves are closed
- The boiler does not send hot water
- Water pressure is not good (mini 1.5bars-maxi 3 bars)

b) The device is not giving its power

- Check that the air inlet is not obstructed
- Installation water filter clogged.
- Insufficient airflow
- Air outlet blocked
- insufficient water flow

SYSTEL

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