PIGSTY OUTSIDE
ELECTRIC HEATER

ELECTRIC MODEL
9 KW
variable air flow: 500 m3/h

TECHNICAL NOTICE
AND USER'S GUIDE

SYSTEL
4 RUE DE L ESSART ROCHER 44140 LE BIGNON – France
Tél. 00 33 (0) 2 51 85 25 55 – Fax 00 33 (0) 2 51 85 24 68 – e. mail : systel@systel-international.com

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WARNING

- Read these instructions carefully!

- The life of this device and its efficiency will be optimal if its use and maintenance is carried out according to the current norms and instructions.
- Before installing the device verify that the local gas distribution (type of gas, pressure, regulator, etc.) is compatible with the heoss requirements.
- The installation, regulation and conversion to another gas, requires the intervention of an authorized technician.
- The Systel factory must be consulted before substituting parts not listed in this manual.

It is responsibility of the installer to: verify that the installation is in accordance with the following norms and to give the user the current user's manual.

Notice to user:

Any modifications to the heater or its installation, even the most minimum modification, change or elimination of security components or pieces that influence the efficiency or the proper combustion, will result in the loss of the CE certification and the voiding of Systel's guarantee.
Is imperative to perform the cleaning and periodic maintenance.

- Systel in coordination with the CE Certification Organisation reserve the right to modify the current manual.
- Only the manual included with each heater can be considered as contractual.

⚠ ATTENTION: this device should not be used in domestic buildings nor in establishments for public use.

⚠ ATTENTION: it is necessary to add a complementary ventilation of 360 or 500 or 715 cubic meters of air flow per hour per heater depending on the model.

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I - DESCRIPTION AND OPERATION

- The purpose of this heoss hot air generator is the raising of farm animals and heating of agricultural use warehouses.

- It is a progressive heater with automatic ignition. It works with electricity and it should be placed outside the farm buildings.

- It is regulated progressively with 0-10V input that corresponds to the power range of the heater from 1,5 KW to 9 KW (depending on the number of the six 1,5 KW resistances that are on or off).
.
- CE Certified heater.

I.1. Description of the heater:

- AISI 304 Stainless steel.
- 6 resistances
- Distribution fan with a maximum flow of 500 cubic meters per hour.
- Automatic variable fan flow.

It is controlled by a programmer that controls the operation cycle of the generator, the safety controls. This programmer is equipped with a reset system in case of a fault and can be equipped with a remote reset.

- Thermal protection an overheating thermostat.
- Fan operation is controlled by a pressure switch.

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I.2. Instructions for use:

- Maintain this heater in accordance with these instructions.
- Maintenance is necessary after each brood is raised. It is also necessary to regularly verify that there is not any problems in the heater, hot chamber, cables, ducts...
- Regularly verify that the air inlets are not blocked.
- Verify that the hot air can circulate normally inside the farm, that no obstructions are blocking the air outlets, and that the baffles are not closed.

I.3. Operation:

- When the heater is turned on from the farm switchboard, the fan starts and the resistances are lit.

- When the desired temperature is reached, the resistances are stopped and the fan continues to ventilate for an additional 60 seconds, in order to cool the hot chamber.

I.4. Security:

- Loss of electrical flow is detected and this stops the heater and sets it in security mode. The ventilation fan stops 60 seconds later.

- Thermal protection of the heater is assured by an overheat thermostat.

I.5. Ignition:

To turn on the heater, please read the ignition instructions carefully (page 15)

I.6. Turn off:

- To stop the heater for a short period of time it is sufficient to turn down the desired temperature via the switchboard or microprocessor (under 1.9 V the heater stops).
- For a longer stop, turn down the desired temperature via the switchboard or microprocessor, wait for the resistances and the fan to stop (after 60 seconds in case of the fan) (page 19).
You can then cut the electrical feed at the on-off switch.

Only cut the electricity in case of emergency or to turn off the heater for long periods of time.

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II - TECHNICAL CHARACTERISTICS

MINIMUM POWER	KW	1.5 kW	CONCERNED COUNTRIES
MAXIMUM POWER	KW	9 kW	BE-CH-ES-FR-GB-GR-IE-IT-PT
ELECTRIC CONNECTION			380 V - 50 Hz
NET WEIGHT		KG	15 kg
INCREASE OF TEMPERATURE		°C	58°C for a 10°C entrance air
MAXIMUM AIR FLOW		m3(n)/h	500 m3(n)/h
AIR FLOW DISTANCE			15 M
FAN MOTOR ABSORBED ELECTRICITY			62 W
TOTAL ABSORBED ELECTRICITY			10 KW

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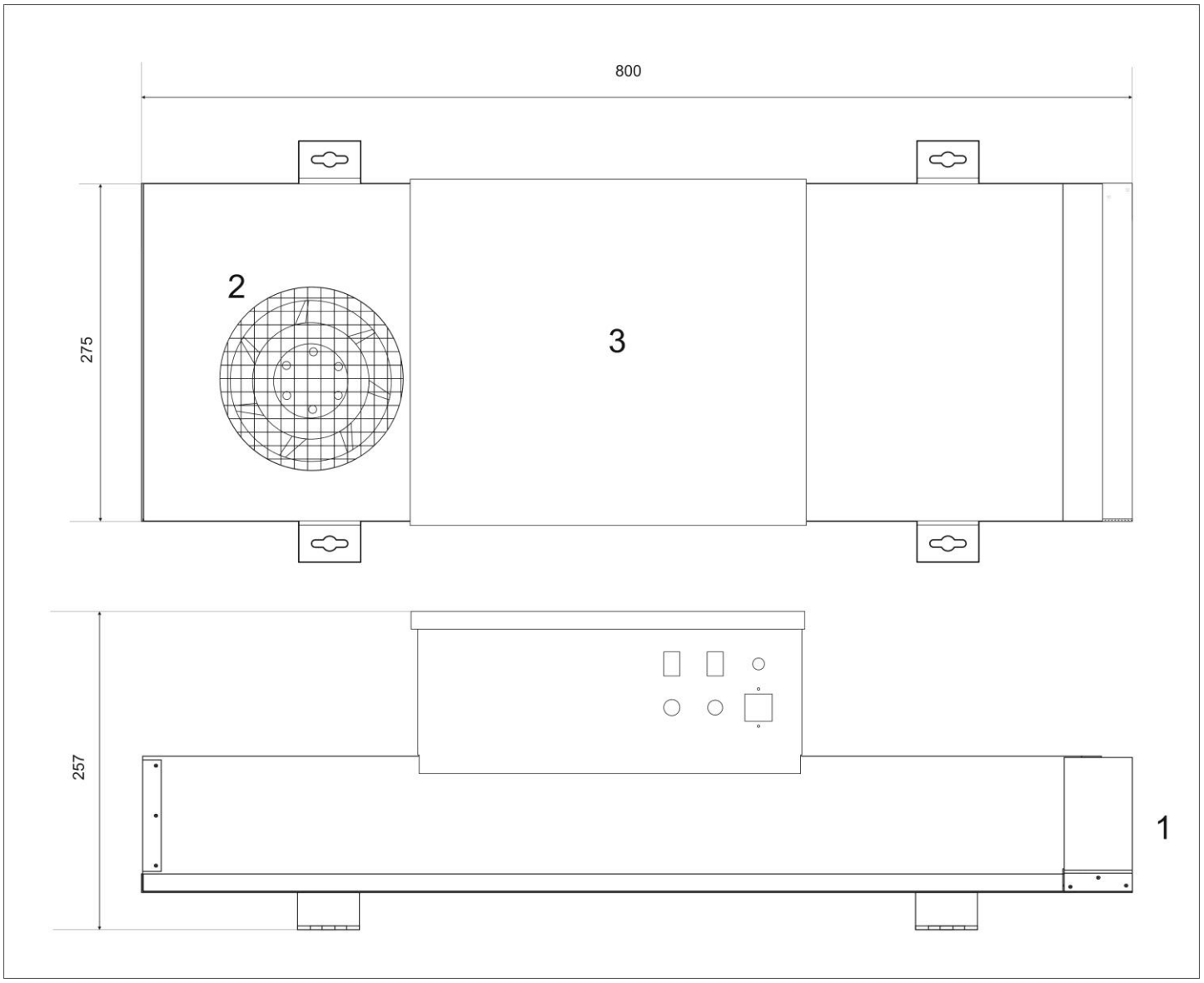
III - DIMENSIONS



1- Hot air outlet
2- Outside & inside air inlet
3- Electronic box top

IV - RULES

The installation must be in accordance with the current legal and regulatory requirements and must be carried out according to the manufacture's prescriptions and instructions.
It is also the responsibility of the installer to respect the current prescriptions and regulations with reference to the type of farm building.

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V - INSTALLATION

heoss is ready to work inside or outside the pig and poultry buildings.

V.1. Heater location:

- The heater can be mounted horizontally and vertically.
- Keep the air inlet and air outlet free of obstructions.
- It is necessary to have a minimum space around the heater in order to have good air flow and sufficient space for maintenance and repair.
- The model, number and placement of the heaters depends on the size of the farm.
- Outside installation examples (2 and 3) and inside example (1):

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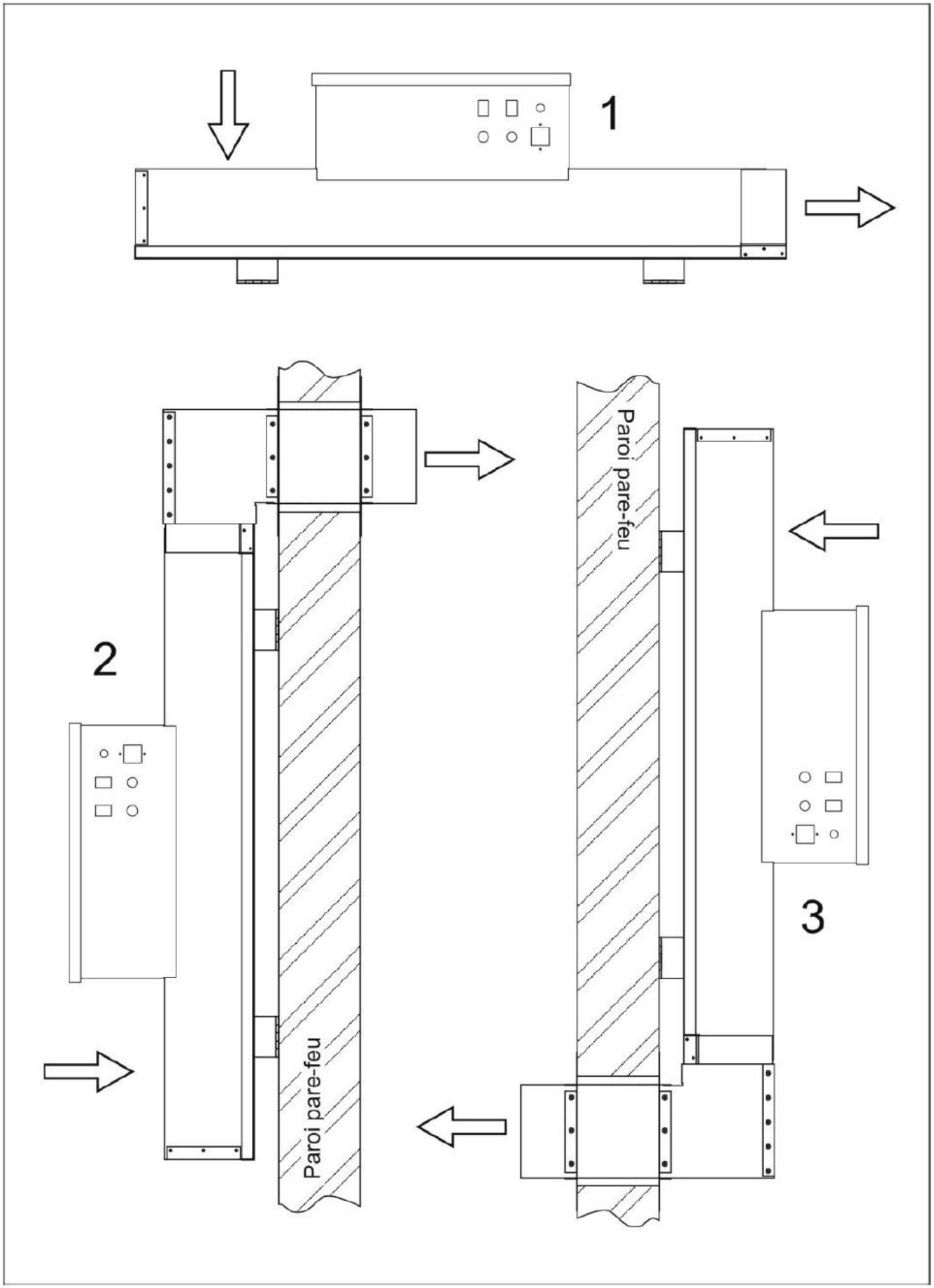

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V.2. Installation of the heater:

- Verify that the structure of the farm building is strong enough to support the heater and its accessories.
- It is necessary to have a minimum space around the heater in order to have good air flow and sufficient space for maintenance and repair.
- 4 fasteners with holes with diameters of 12 mm are provided on the bottom of the device for its hanging.

The heater have to be mounted rigidly to avoid tension on the gas and electrical connections.
If outside installation, we also recommend protecting the heater from rain, snow, ice and humidity with an optional roof and verifying the electrical box is properly closed.

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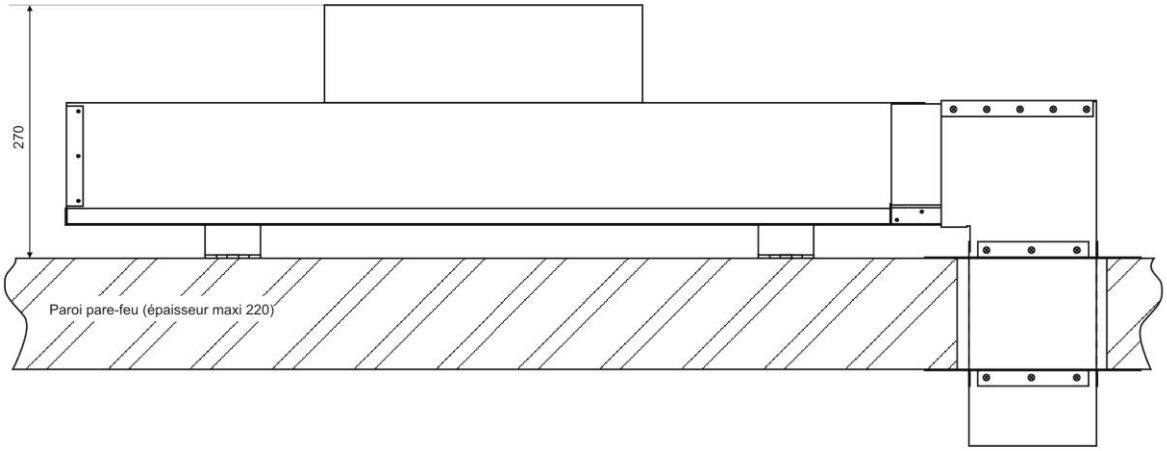

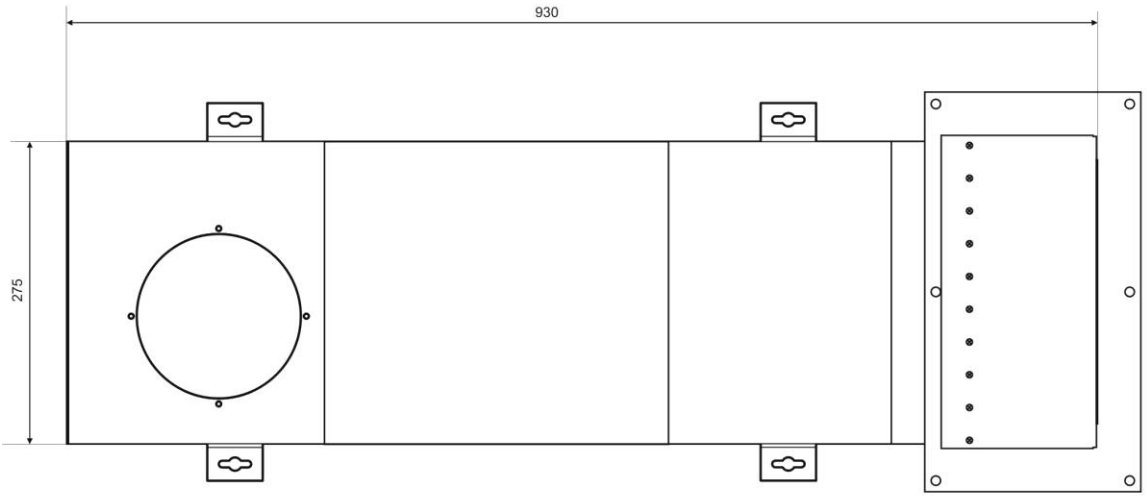

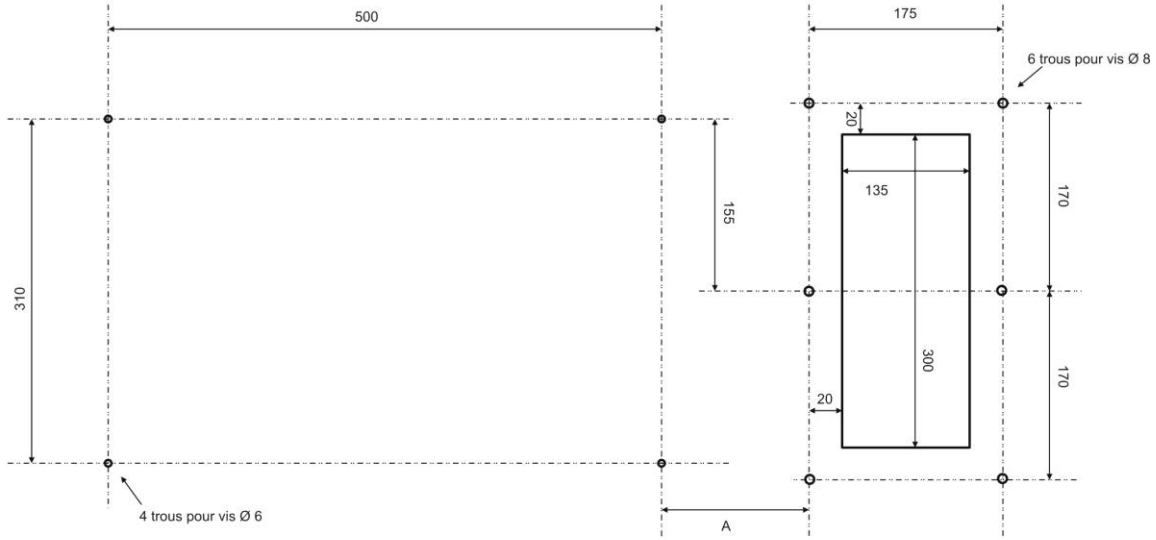

Si la bouche est montée vers le haut A=150
Si la bouche est montée vers le bas A=165

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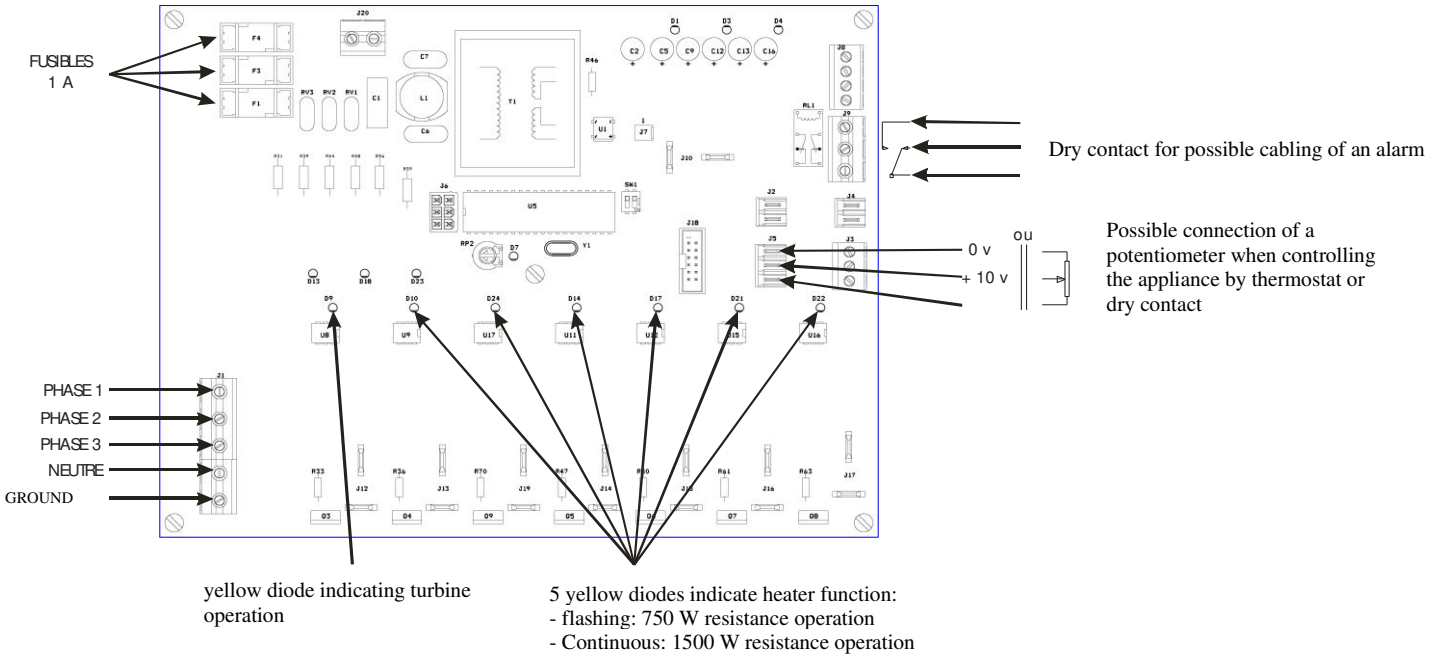
VI - ELECTRICAL CONNECTIONS

- The heater is shipped wired according to the electric schematics on the following pages.
- The heater should be connected to a switchboard that has a 0 / 10V output to allow it to work progressively. You can also connect the Heoss directly to a thermostat, in which case it will not works progressively.
- The electrical connection must be made according to the current regulations (gauge of the conductors, ground, etc.) and according to the electrical schematics in the following pages. It is not necessary to respect the position of the neutral and the phase.

Power supply voltage:

- The input voltage is three phased 380 V (Tri + Neutral).
- For the dilution turbine, verify that the direction of rotation corresponds to the direction indicated by the arrow on the fan support.
- A warning light (diagram on page 19 n°14) indicates the possible safety of the device.

Electrical details:



The ground connection is made via the 380 V power outlet of the device, which must be connected to a power outlet with a ground terminal.

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VII - TURNING ON AND OPERATION

The heoss heater is completely inspected and tested at the factory before shipment. Before turning on, it is mandatory to verify that the installation was carried out in accordance with these instructions.

VII.1. Ignition:

- Make sure that the hot air outlet shutters are open, and that the heater is closed.
- Turn the switch on.
- Set the switchboard for the desired temperature.
- After two minutes the heater will turn on.

VII.2. Operation:

- The switchboard of the farm sends the heater a heating command in form of a 0 - 10 V signal. The heater starts at a preset point of 1,5 Volts.
- In case of overheat, the overheat detector puts the Heoss in security mode. The security indicator lights (the luminous indicator at the farm control also lights if installed). This fault can be reset (remote reset if installed) after a few seconds by pressing the heater or remote reset.

- If the amount of combustion air is insufficient, the resistances turn off and a new cycle is started. If the operating conditions are correct the heater starts, if they are not, the heater goes into security mode.
- In case of overheating, an overheating thermostat cut the electric feed to the Heoss:

A one minute cooling time is necessary before resetting the thermostat.

- When the desired temperature is reached and detected by the switchboard, the switchboard sends a stop signal to the heater. The dilution fan continues for 60 seconds to cool the hot chamber.

- To stop the heater for a short period of time it is sufficient to turn down the desired temperature via the switchboard or microprocessor.
- For a longer stop, turn down the desired temperature via the switchboard or microprocessor, wait for the fan to stop.
You can then cut the electrical feed at the on-off switch.
- To turn the heater on, follow the ignition instructions (on page 15).

Only cut electricity in case of emergency or to turn off the heater for long periods of time.

VIII - PERMANENT VERIFICATIONS

- Verify that air outlet and inlet are not covered.
- Verify the quality and the strength of the supports.
- Verify that the dilution fan protection grill is not deteriorated or covered.
- Verify that electric parts, cables and resistances are clean and functional.

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IX - PERIODIC MAINTENANCE

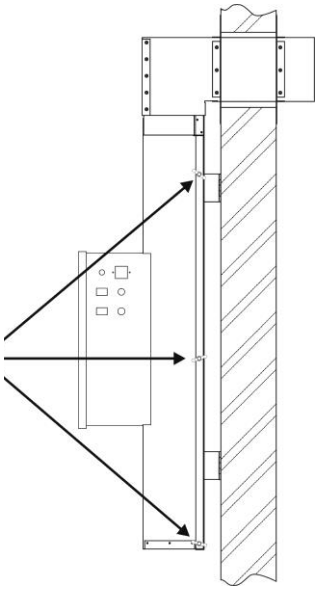
- Before beginning maintenance, wait for the dilution fan to stop and cut the electrical feed.

- Periodic maintenance is necessary after each brood is raised. The frequency of maintenance depends on the environmental conditions of the farm in which the heater is installed (dust in the air, type of animals, vegetation).

Cleaning:

Open the mobile part remove the 3 screws

3 butterfly screws to be unscrewed to reach the inside of the appliance



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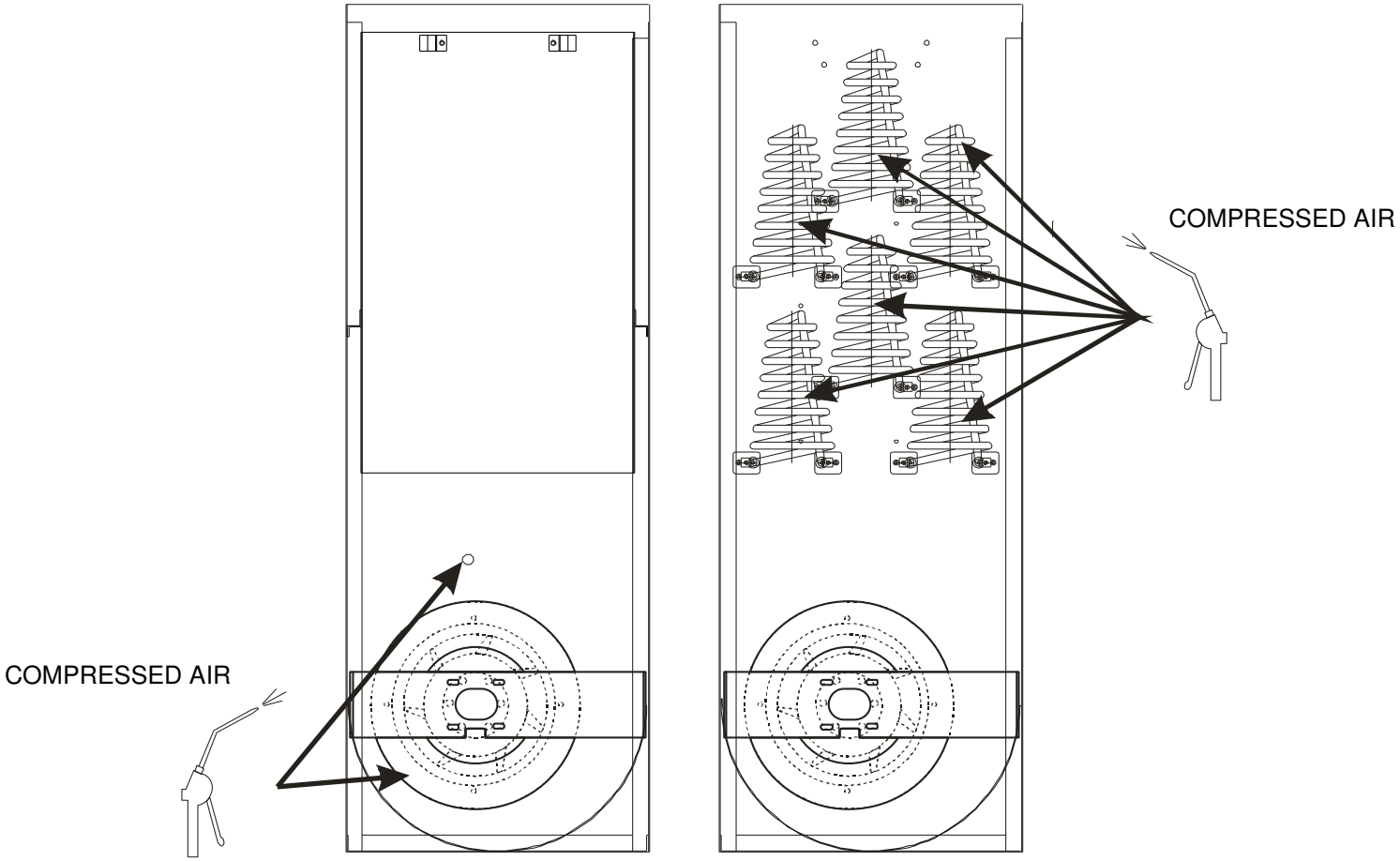
1 - Clean the air intake grille outside the unit with compressed air.
2 - Then inside the appliance: the turbine, the perimeter of the hot chamber, and the air intakes of the burners. And clean the thermostat from overheating.
3 - Then unscrew the 4 hot chamber mounting screws
4 - It is then possible to clean the 6 resistors with compressed air.



- After cleaning, replace the 2 hot chamber screws and close the mobile part, replacing the three screws.

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