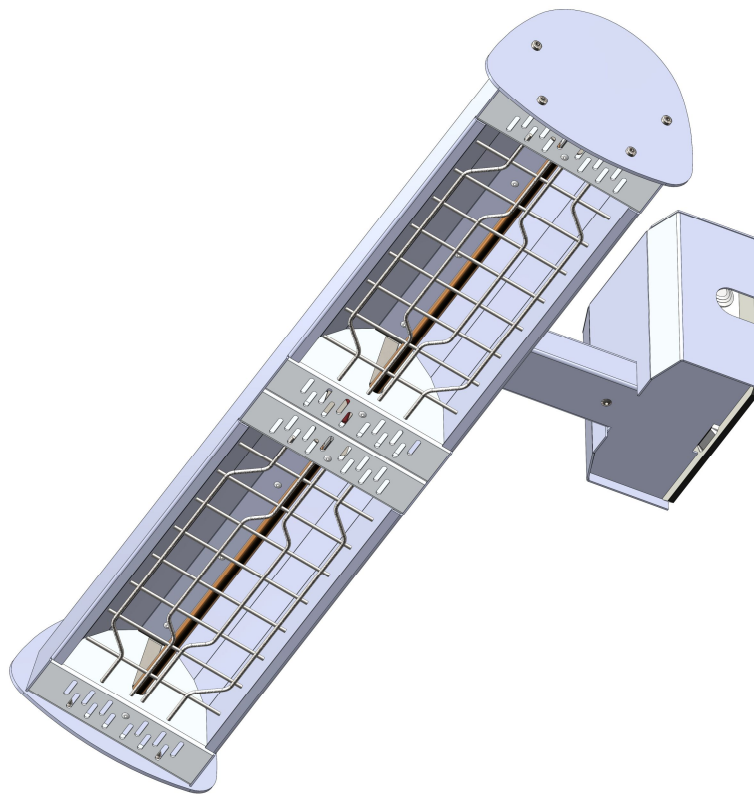


Cal-E HEATERS

INSTALLATION, MAINTENANCE AND USE INSTRUCTIONS

Nr 05000667 / 0



**Short waves infrared radiant heater (IRC)
Aluminium body
Built-in adjustable hanging bracket**

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SUMMARY

1. WARNINGS	Pages	3 to 4
2. PRODUCT SPECIFICATION	Pages	5 to 6
2.1 Description		5
2.2 Technical specifications		6
2.3 Cal-E heater dimensions		6
3. INSTALLATION	Pages	7 to 13
3.1 Rules and regulations		7
3.2 Unpacking and checking of equipment		7
3.3 Diagram of a standard installation		8
3.4 Minimum safety clearances		8 to 9
3.5 Fixing of heaters		9
3.6 Inclination of heaters		10
3.7 Electrical connection		10 to 13
4. MAINTENANCE	Page	13
5. REPAIRS	Pages	14 to 17
5.1 Spare parts		14
5.2 Replacing a lamp		14 to 17

GENERAL

- *In the process of continuous improvement, SBM products may be modified without notice.*

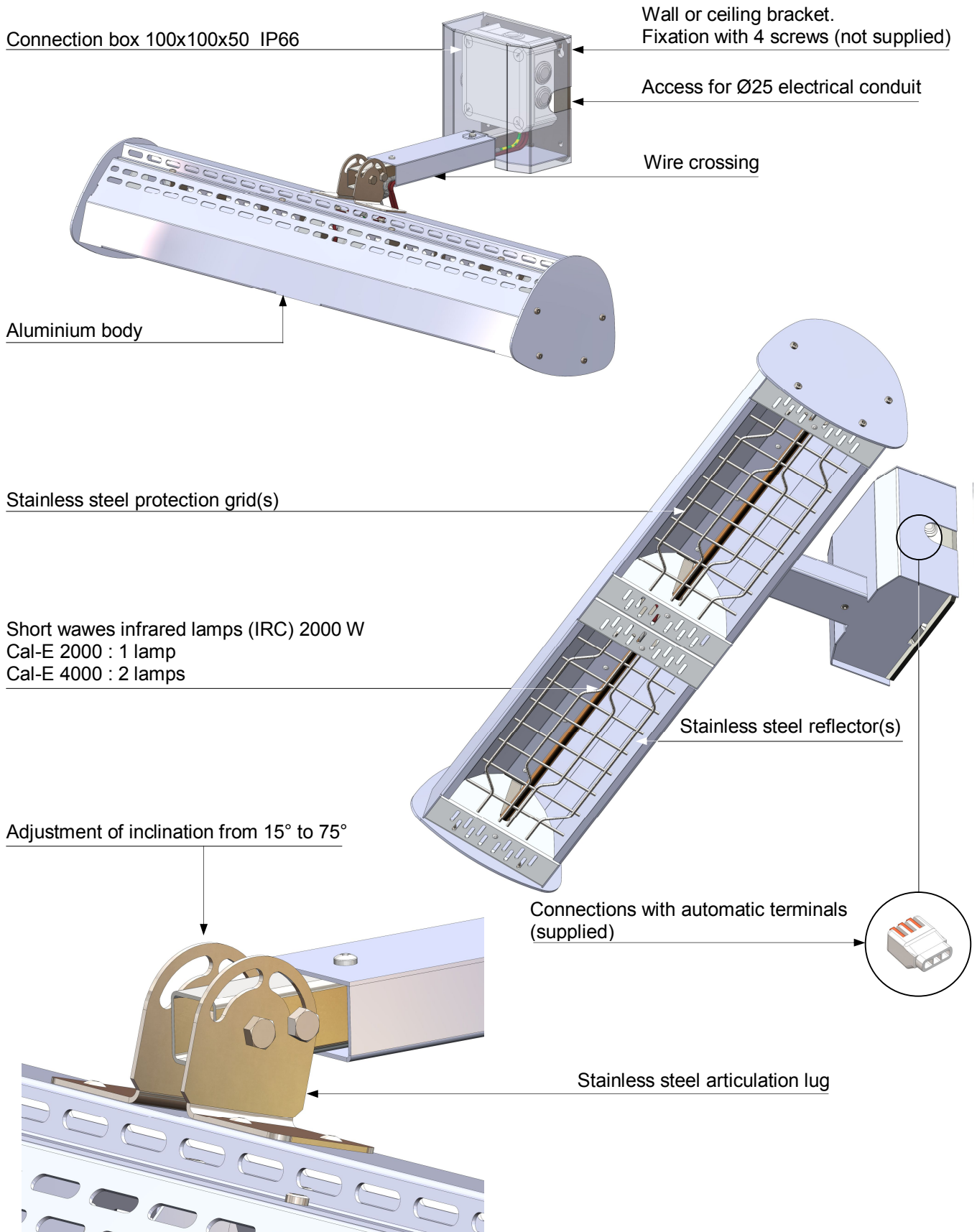
1. WARNINGS

- Before using this product, please read carefully the following technical instructions. The SBM company could not be responsible of any damages linked to a non-respect of the rules mentioned.
- In this manual, the symbol  means "**IMPORTANT**"
- In this manual, the symbol  means "**DANGER**"
- At its end of life, the product shall be brought to a collect point of Waste Electrical & Electronic Equipment (WEEE) or to the equipment supplier. 
- This manual have to be kept closed to the installation. It can be dowload on the SBM website.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
- Children shall not play with the appliance.
- Cleaning and user maintenance shall not be made by children without supervision.
- Children of less than 3 years should be kept away unless continuously supervised.

- ❑ Children aged from 3 years and less than 8 years shall only switch on/off the appliance provided that it has been placed or installed in its intended normal operating position and they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
- ❑ Children aged from 3 years and less than 8 years shall not plug in, regulate and clean the appliance or perform user maintenance.
- ❑ **CAUTION** - Some parts of this product can become very hot and cause burns. Particular attention has to be given where children and vulnerable people are present.
- ❑ **CAUTION** - This heater is not equipped with a device to control room temperature. Do not use this heater in small spaces when occupied by persons unable to leave the room alone, unless constant supervision is provided.
- ❑ Statement : heater is not located immediately below a socket-outlet.
- ❑ If the power cable is damaged, it must be replaced by the manufacturer, its after-sales service or similarly qualified persons in order to avoid a hazard.

2. PRODUCT SPECIFICATION

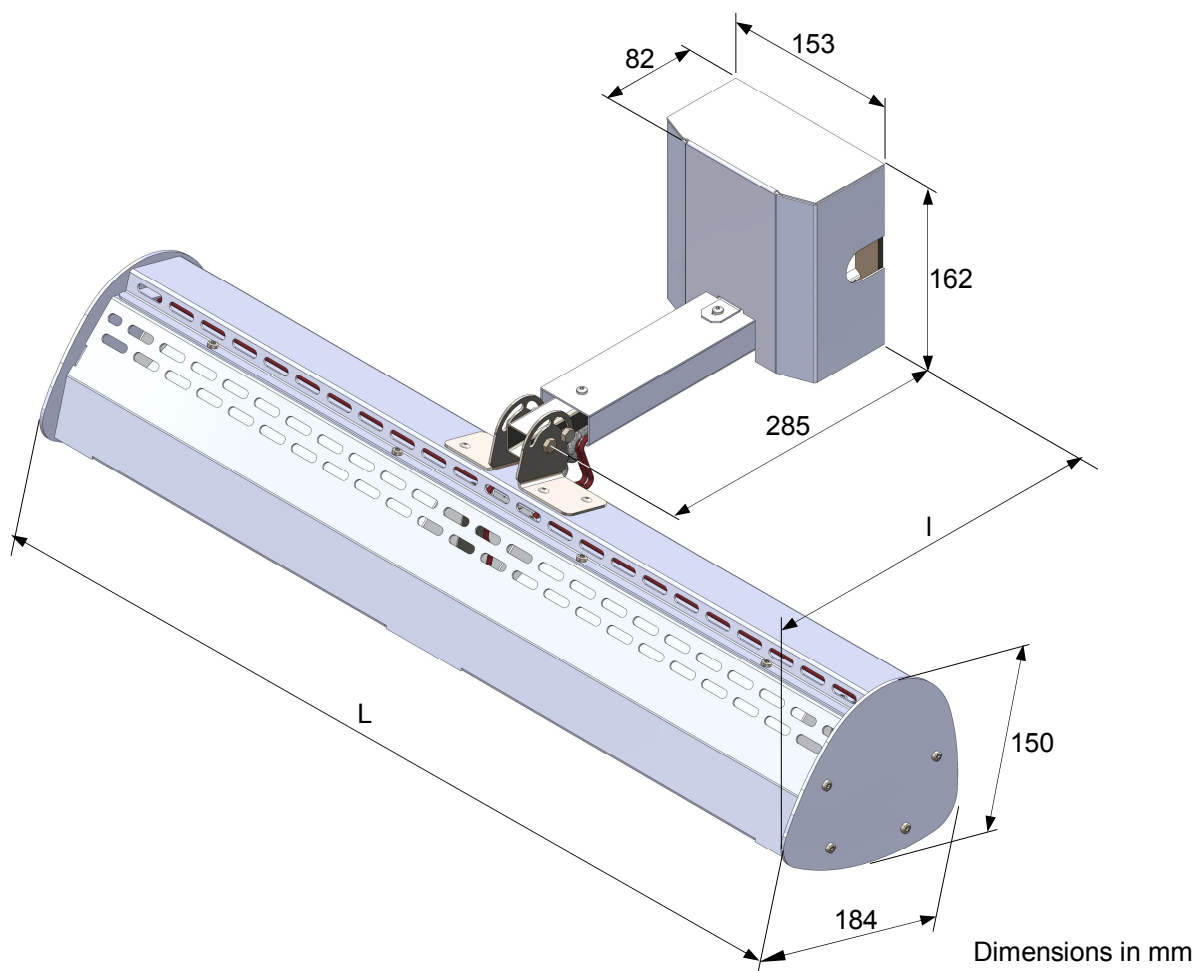
2.1 Description



2.2 Technical specifications

MODEL	Cal-E 2000	Cal-E 4000
Power supply	230 VAC	
Input power	2000 W	4000 W
Rated current	8.7 A	17.4 A
Ingress Protection	IP X4	
Weight	3.5 kg	4.7 kg

2.3 Heaters dimensions



Model	Cal-E 2000	Cal-E 4000
L (mm)	386	766

Inclination	15°	75°
I (mm)	410	462

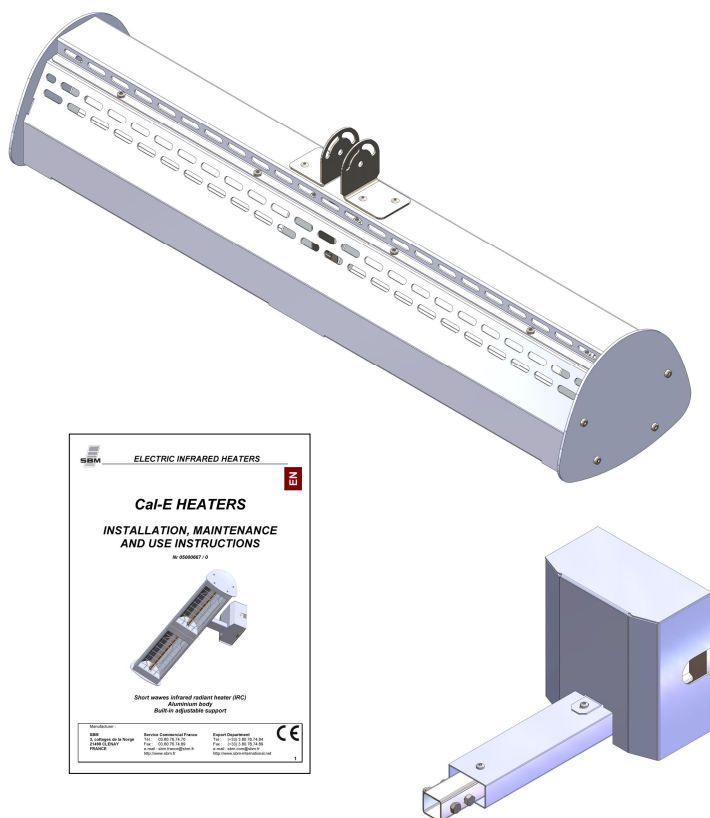
3. INSTALLATION

3.1 Rules and regulations

- Installation of the heaters shall be done by a qualified technician, in accordance with the local regulations
- The installation shall include a RCD (Residual Current Device) with 30 mA sensibility in order to protect equipment and people.
- Heaters must be properly grounded.
- These heaters are designed for a permanent hanging height greater than 2.25 m.
- They shall not be installed close to curtains or combustible materials.
(see 3.4 Minimum safety clearances)
- This heater is not equipped of a temperature control device.
Do not use this heater in small room when they are occupied by persons unable to leave the room unless a constant supervision is expected.
- The appliance has to be installed horizontally with the infrared rays downwards.
- During operation, the heater temperature is very high.
Do not touch the heater during operation.
- Do not cover the heater during operation.

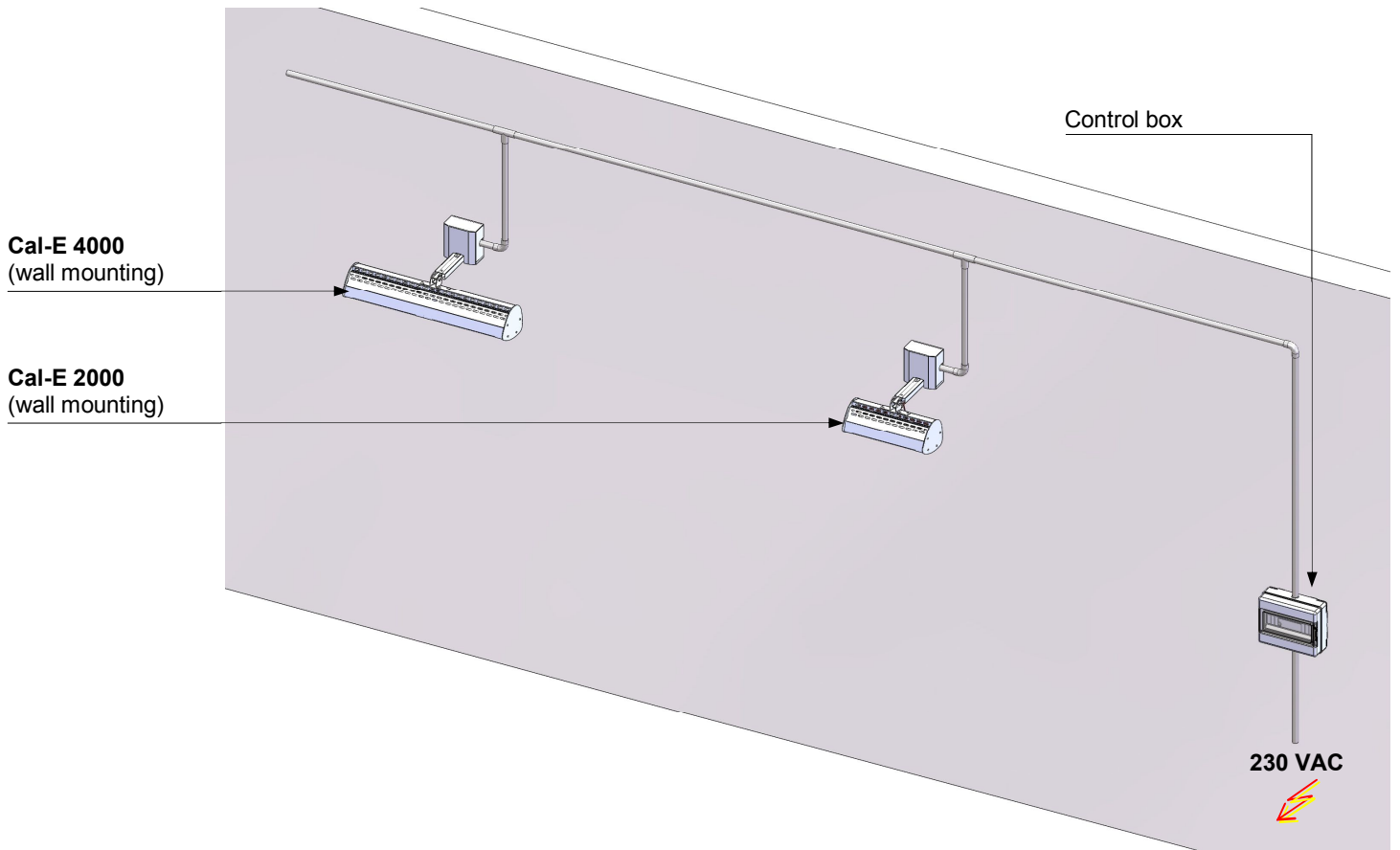
3.2 Unpacking and checking of equipment

- Check the type and quantities against your order.
- Check packing and equipment condition.
In case of damage, file a complaint with the carrier.
- Check the box content.



Cal-E 2000	Cal-E 4000		Rep. (see 3.6 and 3.7)
1 x	1 x		A
2 x	2 x		B
1 x	1 x		C
1 x	1 x		D
1 x	1 x		E
1 x	1 x		F
0 x	1 x		G
1 x	1 x		H
1 x	2 x		I
3 x	4 x		J

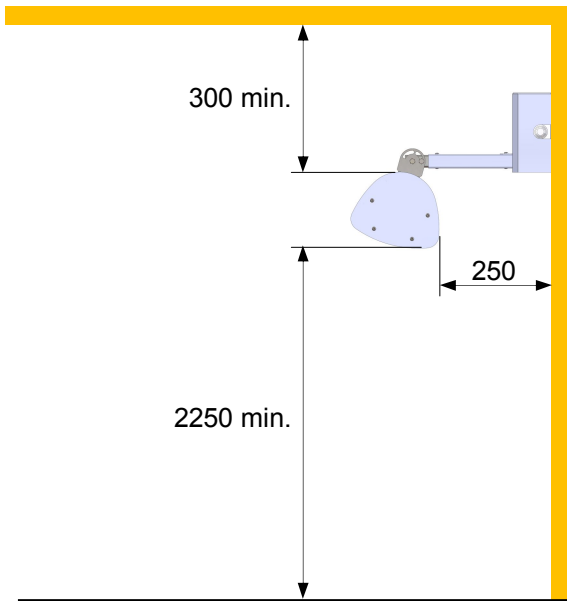
3.3 Diagram of a standard installation



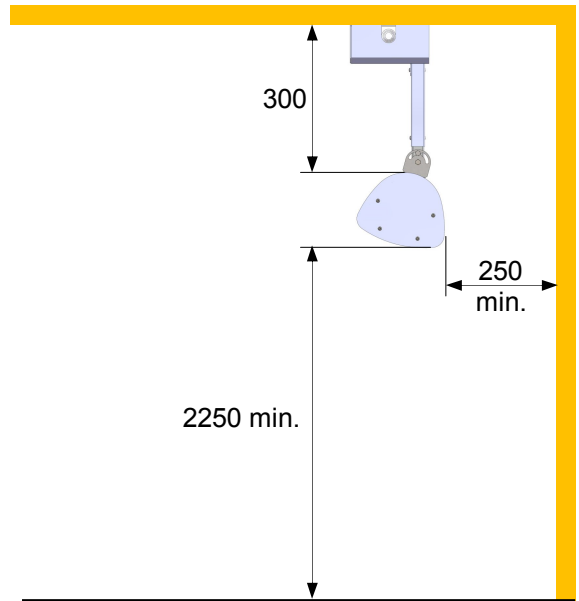
The heaters are always to be installed horizontally for a proper operation of the lamps.

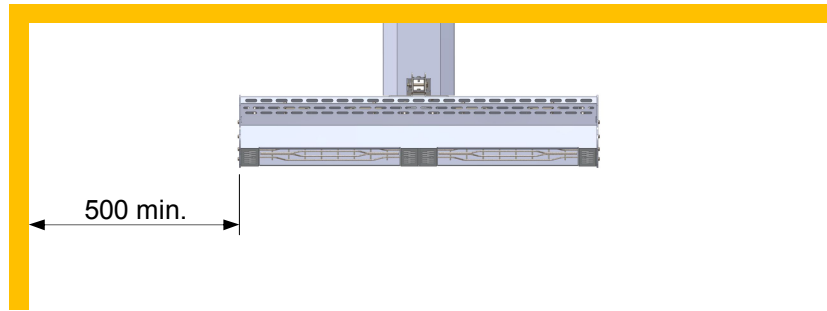
3.4 Minimum safety clearances

Wall mounting



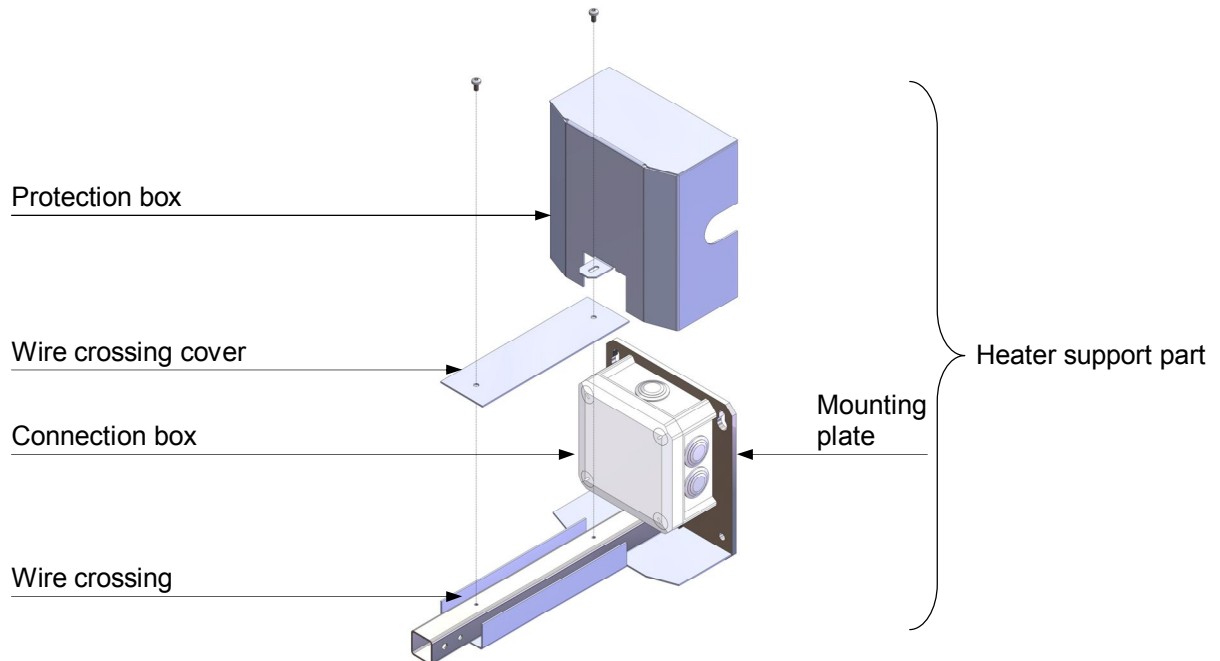
Ceiling mounting



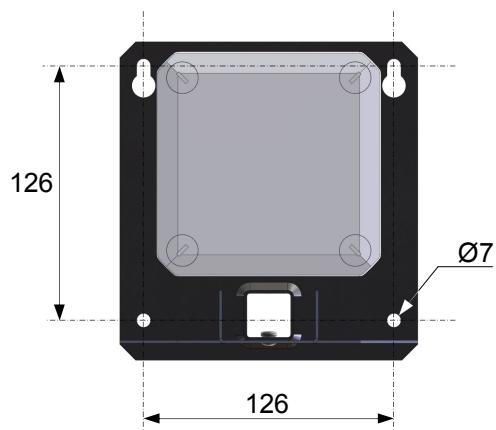


3.5 Fixing of heaters

- ❑ Remove the protection box and the wire crossing cover, from the heater support part. (Use a screwdriver or a Torx T20 spanner)

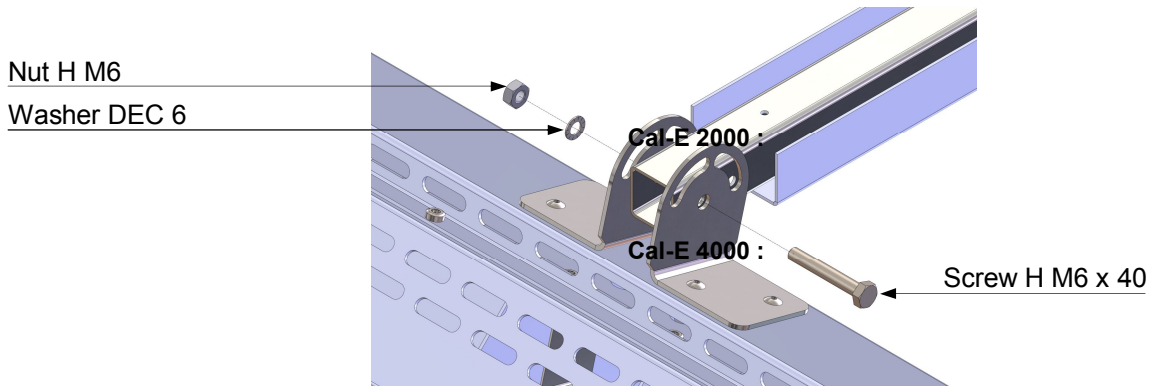


- ❑ Fix the plate to the wall or ceiling using 4 screws adapted to the material.

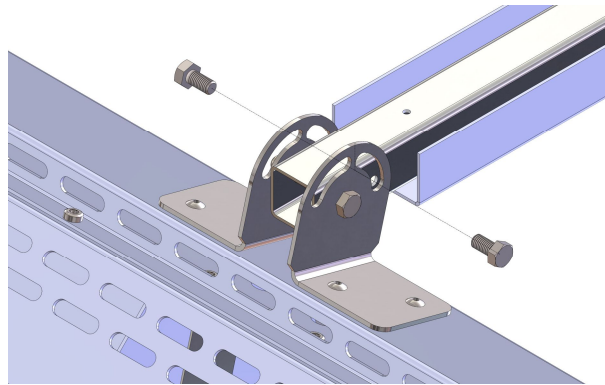


3.6 Inclination of heaters

- ❑ Assemble the heater to the heater support part (without locking the screw).



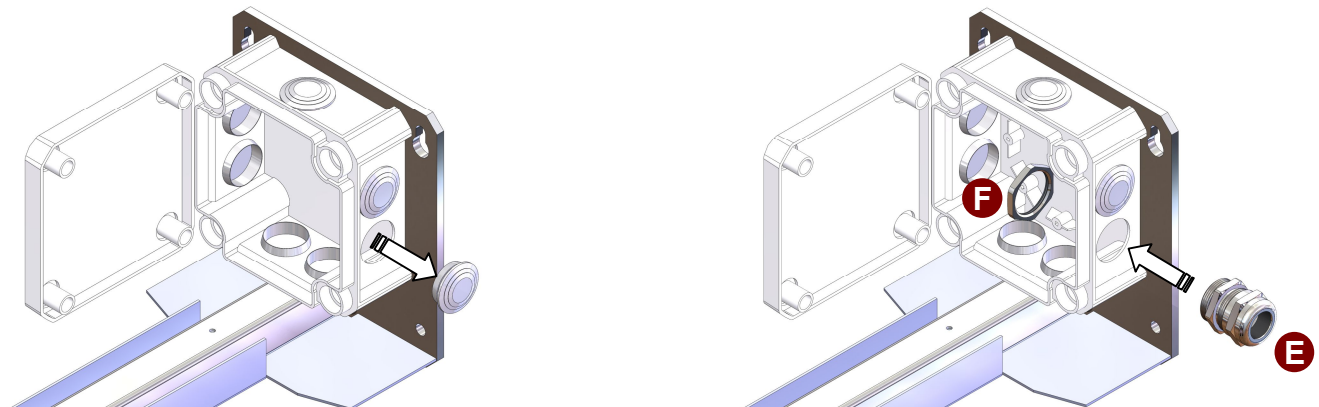
- ❑ Hand tighten the 2 inclination screws into the holes in the tube.



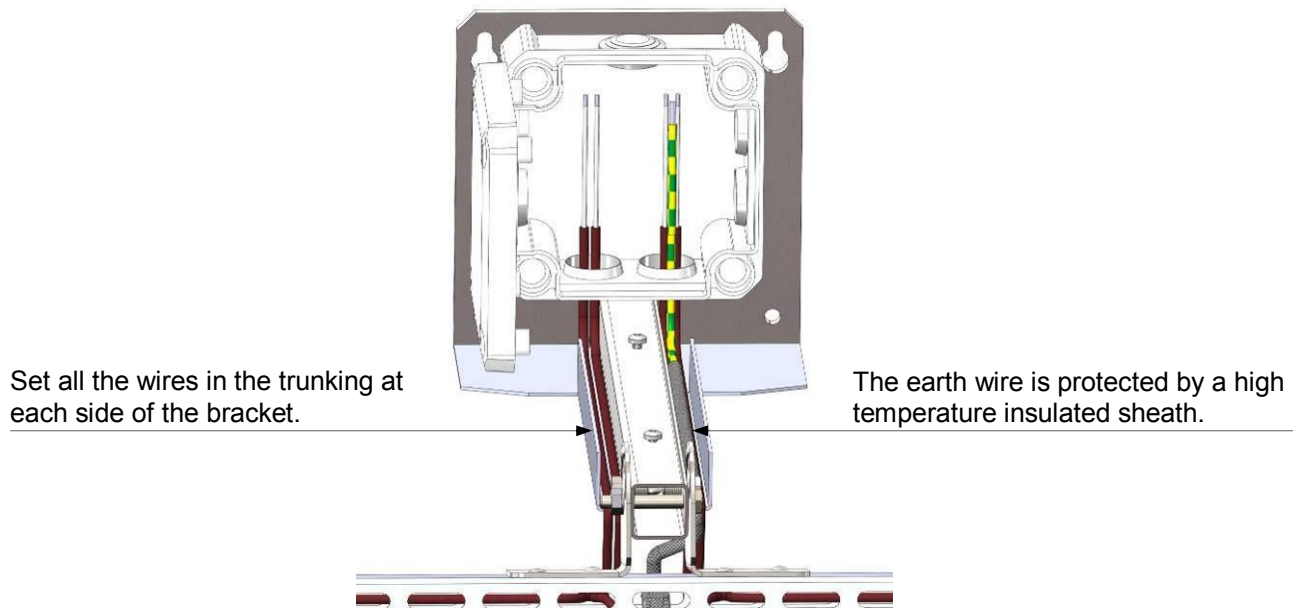
- ❑ Adjust the heater to the desired inclination between 15° and 75°.
- ❑ Block all screws with a spanner.

3.7 Electrical connection

- ❑ The connection can be made with flexible cable type H07RN-F or rigid cable type U-1000 R2V or rigid wire type H07 VR in a rigid conduit (EN 61386-1)
In all cases, the conductors must have a cross-section of 2.5 mm² and there must be a protective conductor (Green/Yellow)
If using cable, use the supplied metal cable gland.
- ❑ In this case, open the connection box and remove a standard cable entry to install the cable gland with its nut.



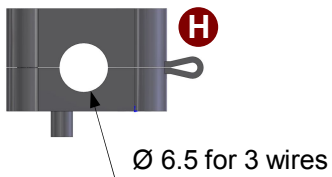
- Drill the 2 bottom entrance of the connection box and insert the wires



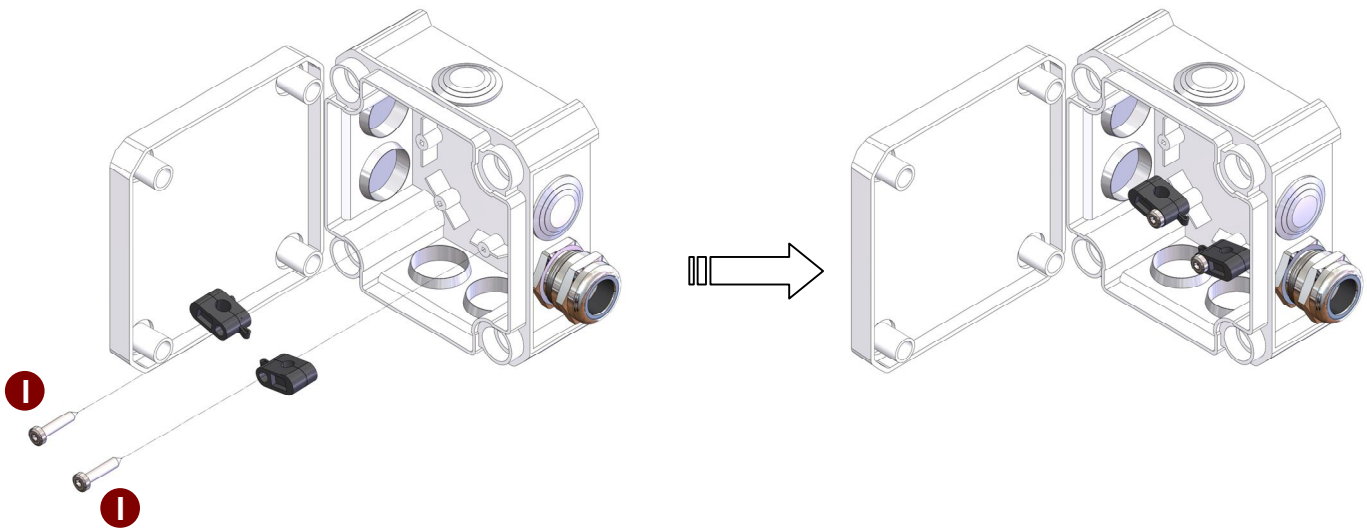
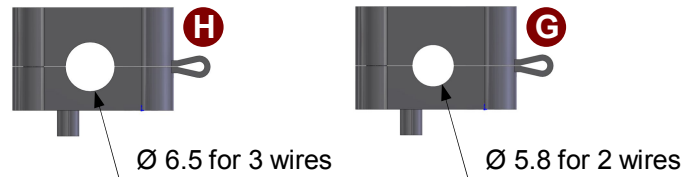
The wires shall not be too much strained at the articulation level : risk to hurt of the double insulated sheath

- Secure the wires coming from the heatert using the clips and screws provided.

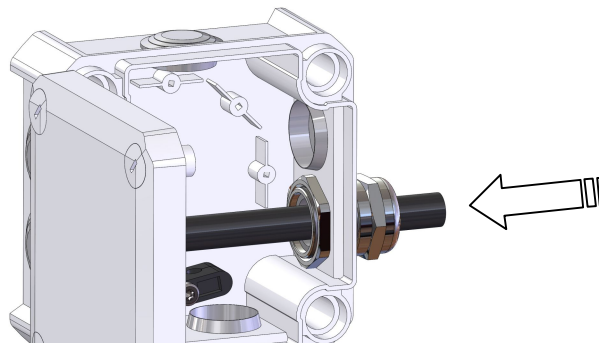
Cal-E 2000



Cal -E 4000



- Insert the power cable and secure it with the cable gland.



- ❑ Carry out the main electric installation and bring the energy to each connection box.



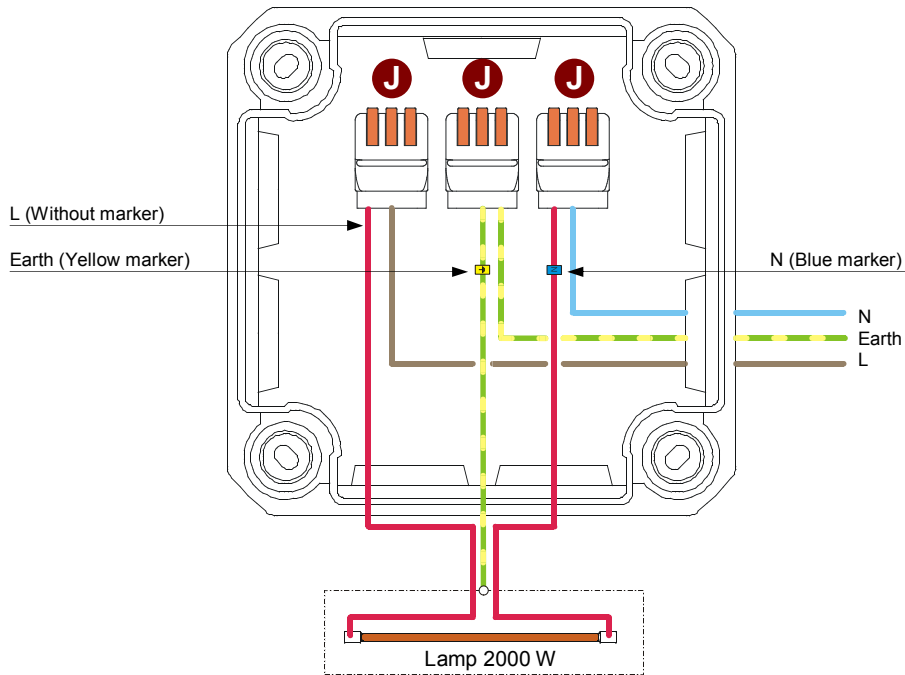
Each heater shall be connected to the electric network independently. It can be controlled by a dimmer with progressive ignition with or without remote or by an electric switch. In this last case, be careful to ignite the heaters one by one in order to limit the inrush currents and so preserve the lifetime of the lamps !

- ❑ Connect the heater to the installation.

Cal-E 2000 :

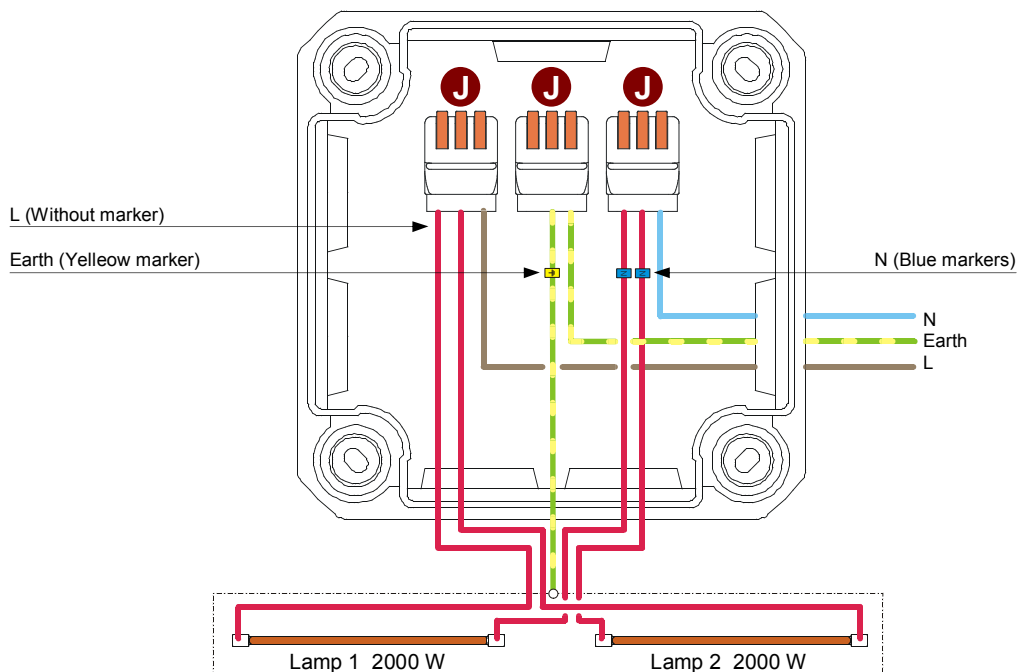
In this case, the lamp is operated at :

- 0 % or 100 % if it is controlled by an electric switch.
- between 0 % and 100 % if it is controlled by a dimmer.



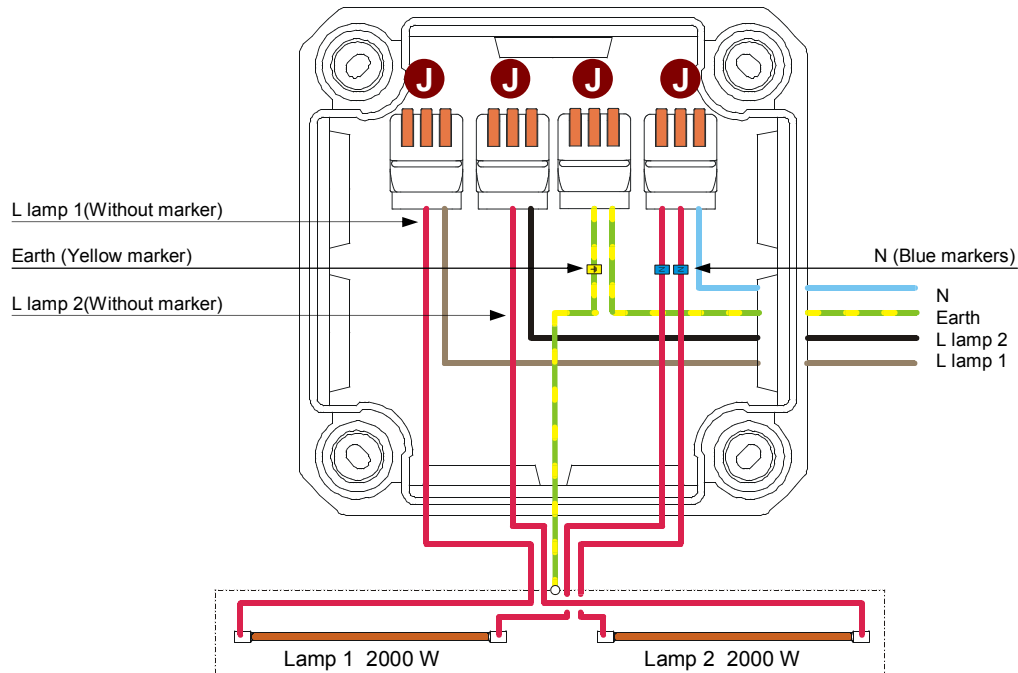
Cal-E 4000 - dimmer :

In this case, the 2 lamps are controlled by a dimmer and they are operated together, between 0 % and 100 %.

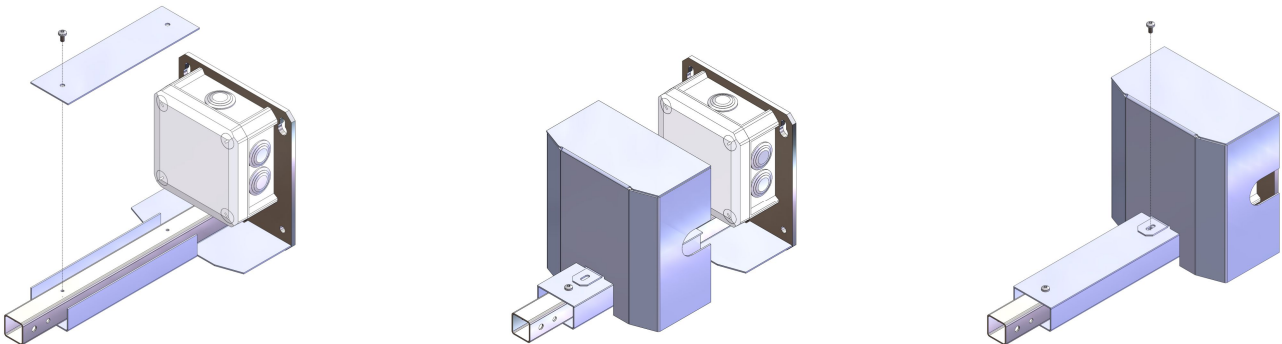


Cal-E 4000 - interruptors :

In this case, the 2 lamps are controlled by 2 different electric switches and they are operated independently of each other at 0 % or 100 %.



- Close the connection box and reassemble the wire crossing cover and the protection box.



4. MAINTENANCE

- Maintenance must be performed by a qualified technician.
- The heater must be "Off" and cold.
- Power supply must be "Off" (RCD on "O")
- Clean reflector(s) with a soft cloth.
- Dust off the heater and the support.



Do not touch the lamp : use gloves or a clean cloth !

- In case of direct hand contact with the lamp(s), immediately proceed to its cleaning with a clean alcohol-damped cloth.

5. REPAIRS

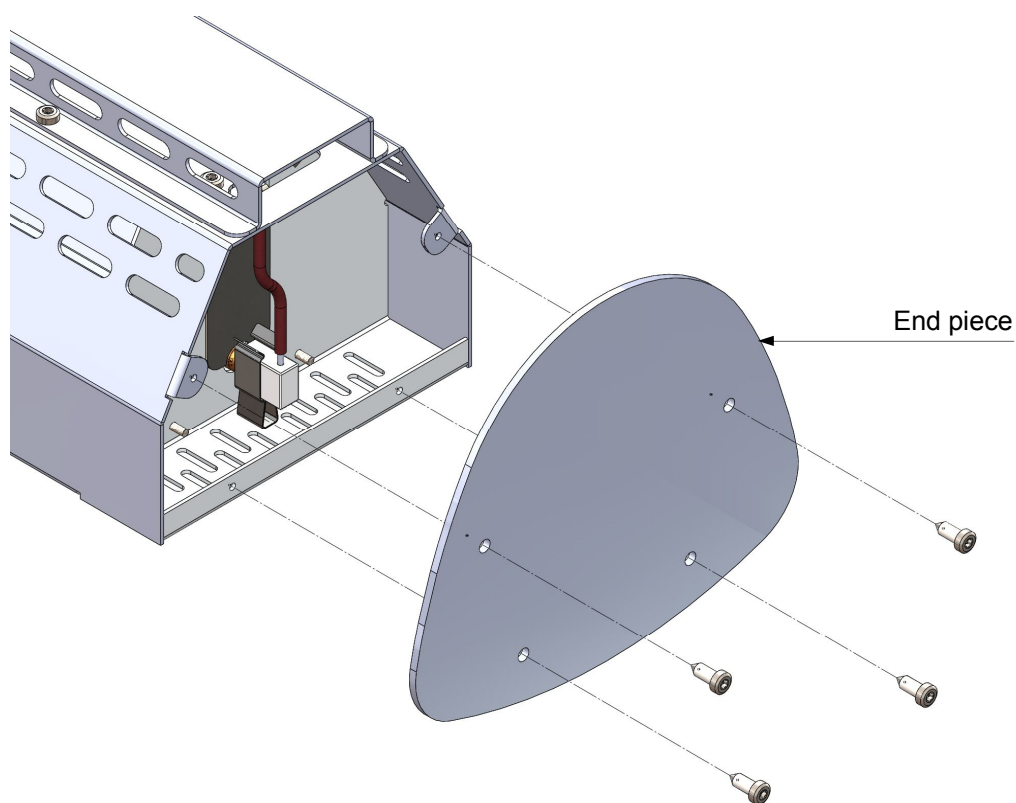
- Repairs must be performed by a qualified technician.
- The heater must be "Off" and cold.
- Power supply must be "Off" (RCD on "O")

5.1 Spare parts

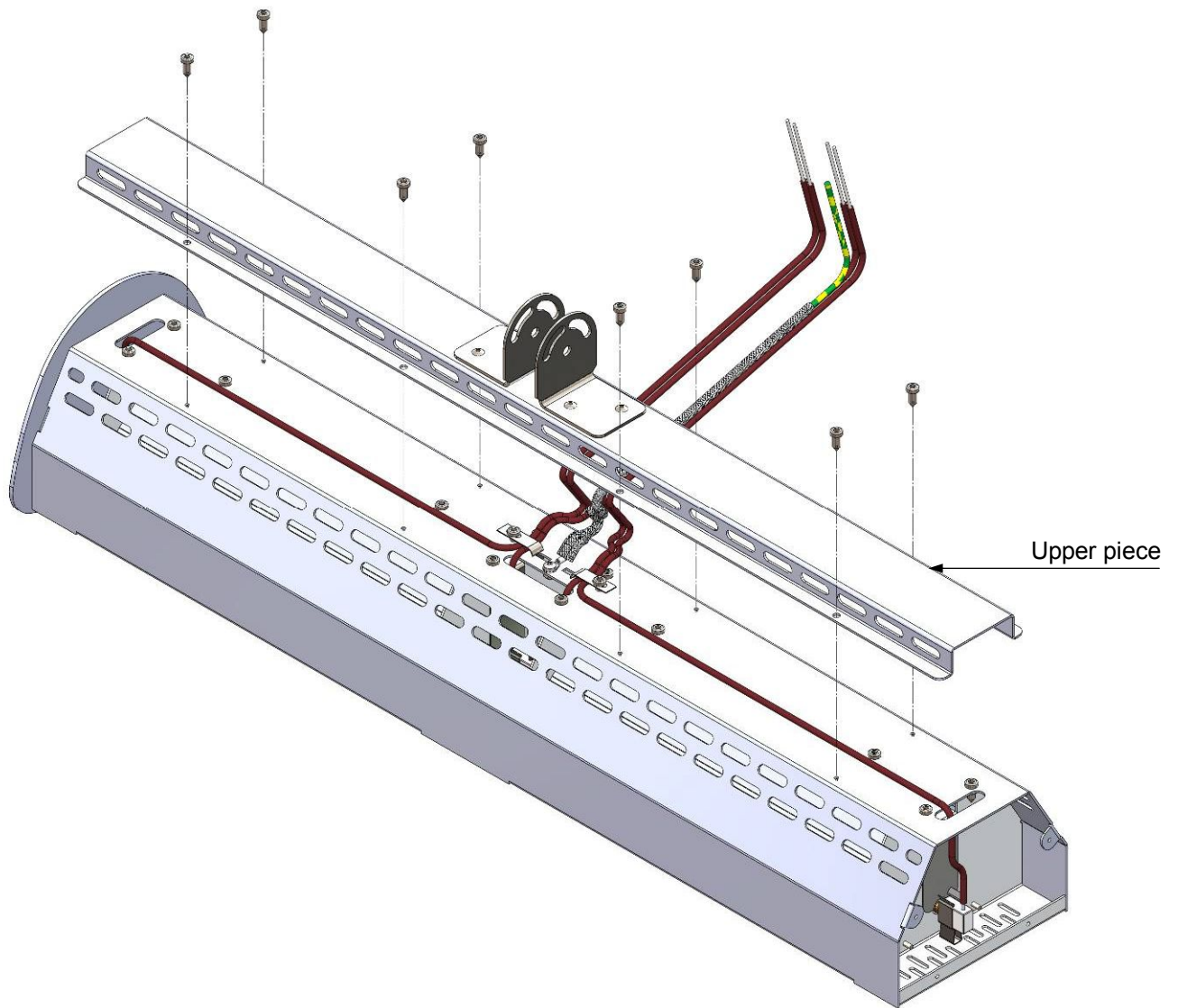
REF.	SPARE PARTS
5817000	LAMP 2000W - 800MM (for heater Cal-E 2000 and Cal-E 4000)

5.2 Replacing a lamp

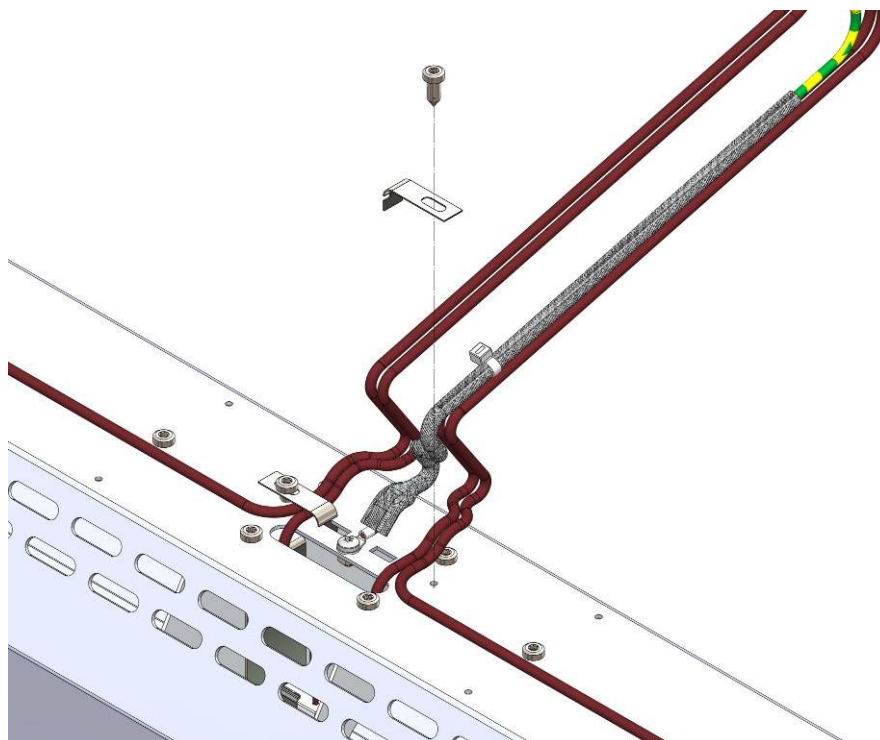
- Remove the protection box and the wire crossing cover, from the heater support part.
(Use a screwdriver or a Torx T20 spanner)
- Open the connection box and disconnect all wires of the heater.
- Remove the heater from the heater support part.
- Place the heater on a table and disassemble it.
- Remove the heater end piece on the side of the lamp to be replaced (Cal-E 4000)
Remove the two end pieces (Cal-E 2000)



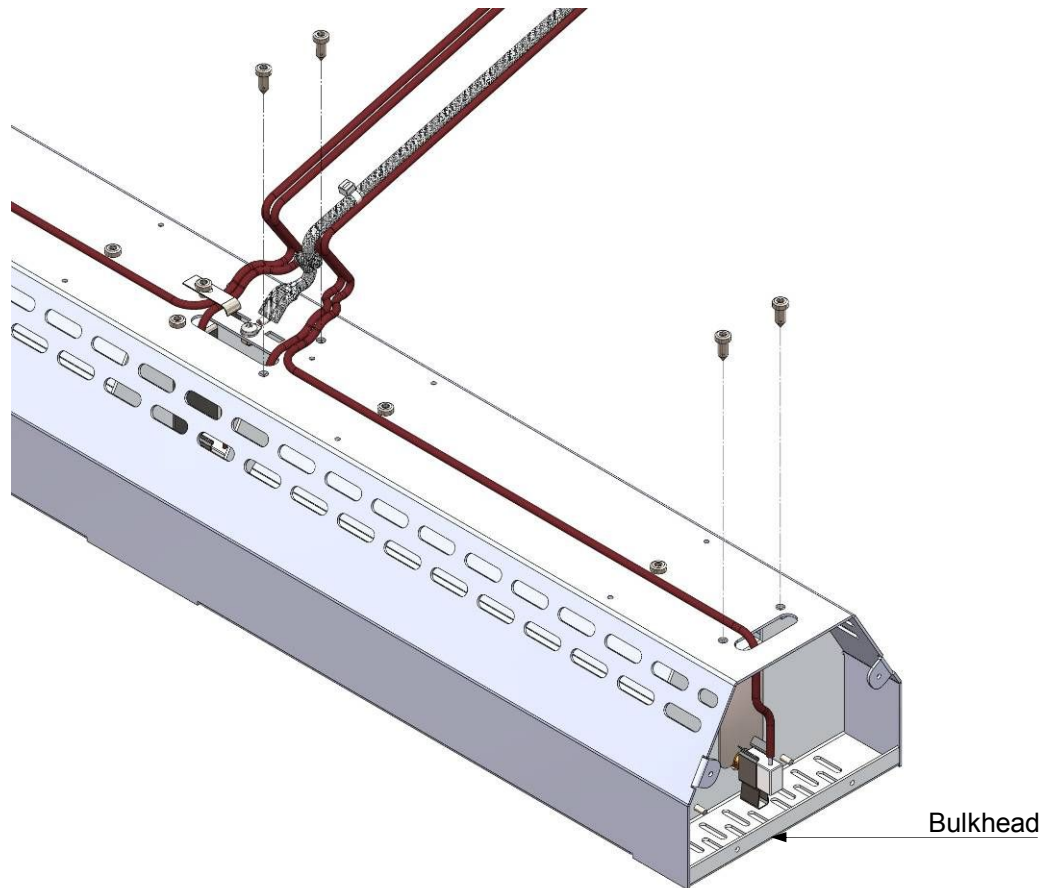
- ❑ Remove the upper piece.



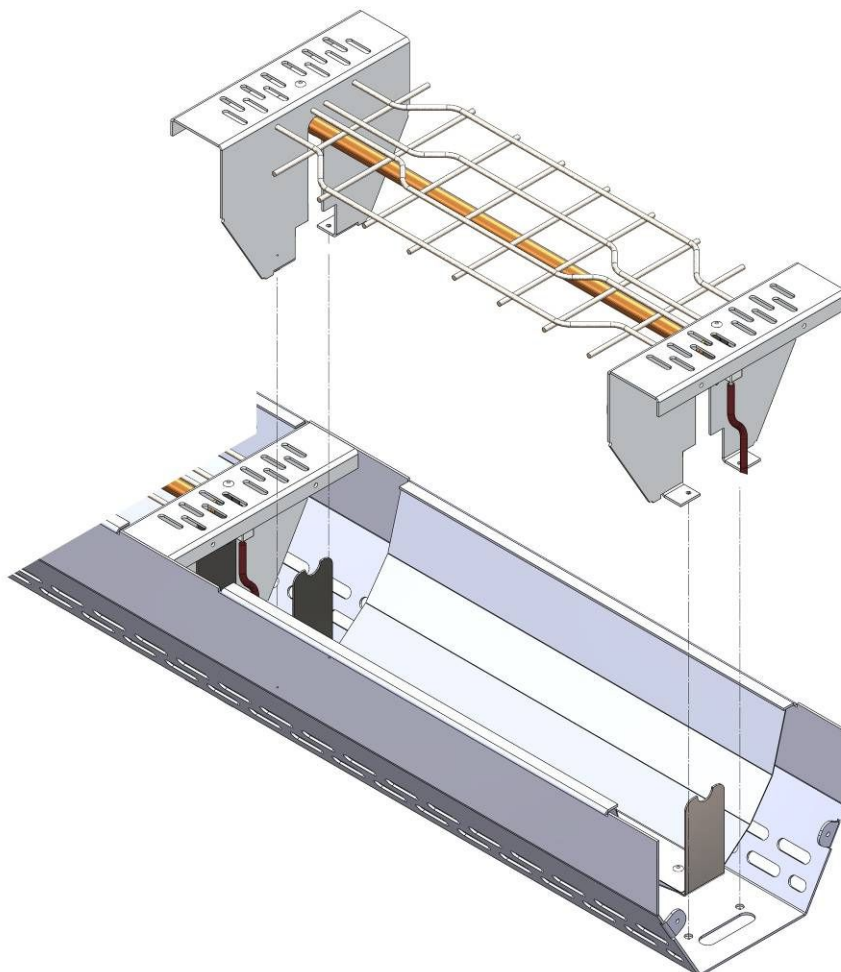
- ❑ Unscrew the fixing of the wires of the lamp to be changed.



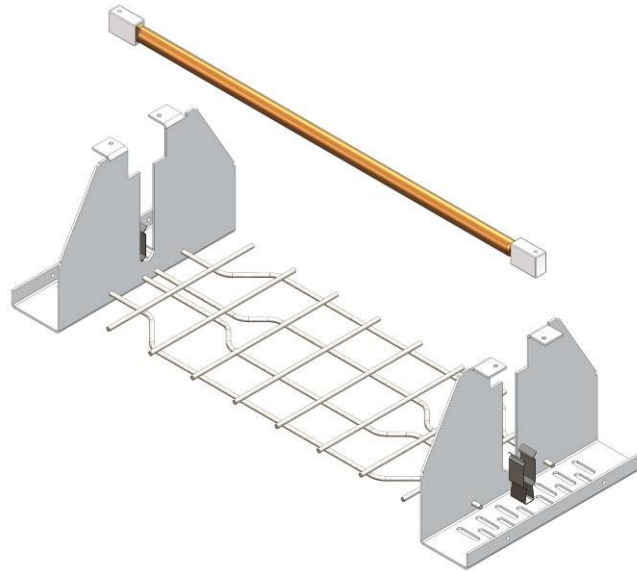
- ❑ Unscrew the two bulkheads of the lamp to be replaced.



- ❑ Turn the heater over to the table and remove the assembly "bulkheads + grid".



- Remove the lamp to be replaced.



- Clean the reflector with a soft cloth.
- Install the new lamp.



Do not touch the lamp : use gloves or a clean cloth !

- Set up the wires and their fixing.
- Reassemble the heater in the reverse order.



***Electrical wiring should not be strained.
The double insulated sheath shall not be hurt.
Check tightening of green/yellow wire on the hood.
Replace the wire fixing.***