



MICROBIO ELECTRIC BURNER

TECHNICAL DOCUMENT



CE CERTIFICATION



The MICROBIO electric heater is a heating device that replaces the Bunsen burner.

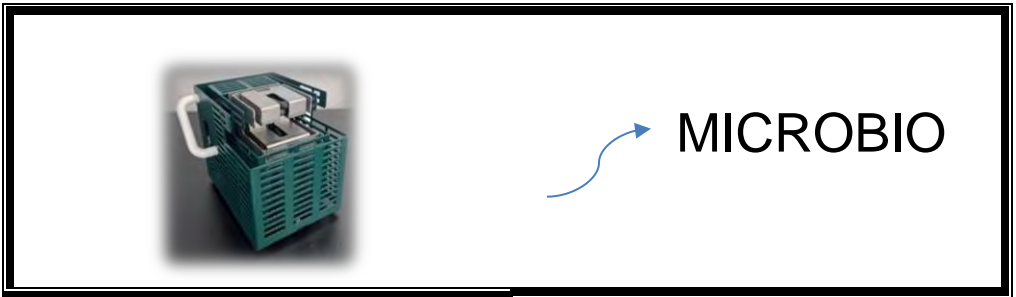
It allows you to create a sterile workspace where you can inoculate your culture media, sterilise your instruments, or for working with glass or heating containers.

EU DECLARATION OF CONFORMITY

1. MICROBIO
2. Name and address of the manufacturer: K-FACTORY

3 rue Denis Papin – 14840 –
Démouville, France

3. This declaration of conformity is issued under the sole responsibility of K-FACTORY.
- 4.



5. The object of the declaration described in point 4 is in conformity with the relevant Union harmonization legislation:

- Directive 2011/65/UE (RoHS)
- Directive 2014/35/UE (LVD)
- Directive 2014/30/UE (EMC)

6. References to the relevant harmonized standards used or references to the order technical specifications in relation to which conformity is declared:

- Reference of standard like EN 62321-1
- Reference of standard like EN 61010-1:2010
- Reference of standard like EN 61326-1:2013

7. Démouville, le 01/03/2023

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1. SAFETY INFORMATION

WARNING

- Heating device, high-temperature gloves mandatory.
- Do not touch heating elements during use. Do not handle the device or touch metal surfaces during heating.
- Observe good laboratory practice when using the device, as well as company safety procedures.
- Heating certain substances may release hazardous or highly flammable gases. Take all necessary precautions, such as using an air extraction system.
- Follow the company's guidelines when heating products with explosion risk.
- A container must be used to heat any substance or material, otherwise the device may be damaged. There must be no physical contact between the heating elements and the substance to be heated.
- Use a suitable container, resistant to high temperatures (800° C).
- Allow containers to cool for 10 minutes after use. Use heat-resistant gloves.
- Do not fill containers on the device while it is connected to the mains.
- The device is designed to heat sterilize an area with a 30 cm radius around it. Do not place anything near it, and be sure to isolate it from any combustible material. Surrounding surfaces must be dry and free of impurities.

- Take care not to cover the device, as it cools with the ambient air.
- Never leave the device to heat up without the supervision of an operator.
- Do not remove rivets from the metal casing.

NOTE: the device must be used in accordance with the above instructions to avoid compromising safety.

2. COMMISSIONING AND INSTALLATION

The device has a Class II installation category according to protection against electric shock.

Environmental conditions:

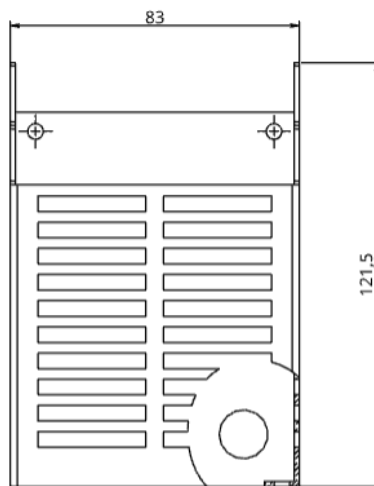
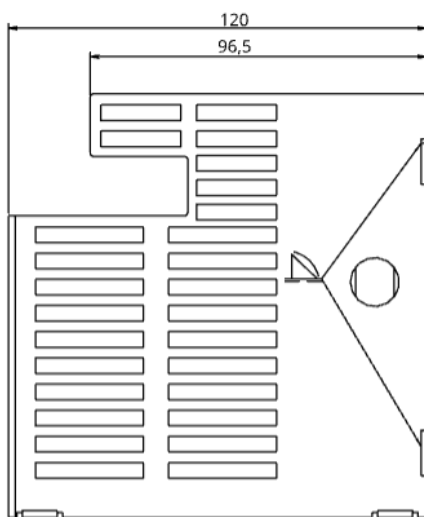
- Indoor use only
- Temperature from + 5°C to + 40°C
- Max. relative humidity : 80%.

Mains connection in compliance with standard NF C 15-100. This recommends the use of a 30 mA high-sensitivity differential circuit breaker.

Operating voltage : 230 V 50-60 Hz ; rated power : 550 W

3. TECHNICAL CHARACTERISTICS

WEIGHT	2.580 KG
DIMENSIONS (mm)	See below
POWER	550 W
POWER SUPPLY	230 V 50-60 Hz
RAPID FUSE PROTECTION	5 A
POWER ON INDICATOR	red
TEMPERATURE ADJUSTABLE	Up to 880 °C 750 °C surface temperature



millimeter

Maximum use room temperature: 40°C

Protection from overheating

-----Accessories not provided-----

4. INSTRUCTIONS




ATTENTION: Always observe the safety instructions.

You are about to use a HIGH TEMPERATURE device.

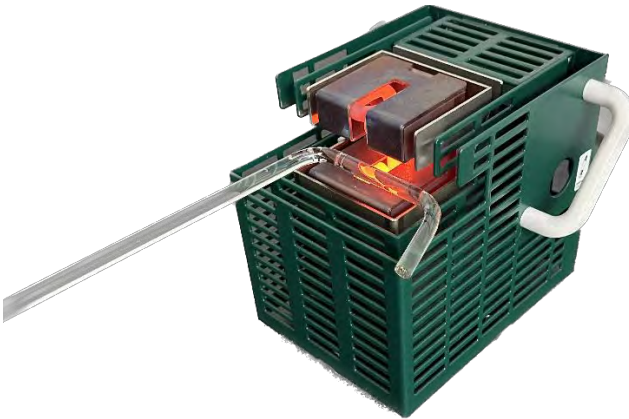
TO MOVE THE APPLIANCE, USE THE TWO HANDLES PROVIDED ON EACH SIDE OF THE MICROBIO

- Place the appliance on a flat, stable surface.
- Connect the appliance to a 230 V earthed mains socket.
- Turn the switch with the **red** power indicator to the ON position. The LED will light up. The device is now in operation.
- To switch off the appliance: turn the control knob back to OFF. The red light will go out. The appliance is now completely switched off.
- The operational temperatures are only reached after a **preheating time** (2 minutes to obtain a sterile space and 6 minutes for glass processing and warping loops) and it is imperative to respect these times in order to carry out the different manipulations.

ACCESSORIES

Temperature controller REF. REG	
Flat-bottomed glassware holder REF. 403 SI	
Metal rod 35 cm REF. 601 ST	

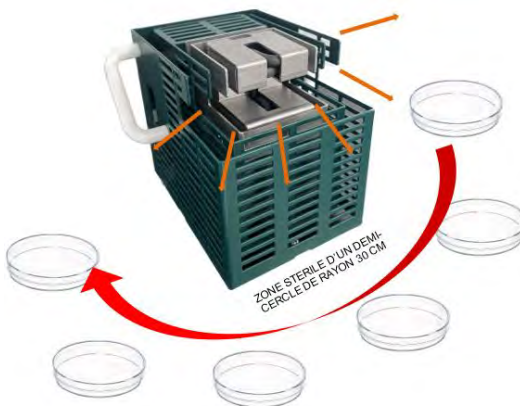
- **GLASSWORK** : preheat for 6 minutes
 - To **make a capillary**, place the tube in the centre of the appliance for 1 minute without moving it. Pull on one side of the tube without moving the melt zone.
 - To **bend a tube**, place it in the centre of the appliance for 1 minute without moving it. Twist gradually.
 - To **make a rake**, the pipette glass must be bent twice.



- **HEATING**: The hot air column replaces the flame so it is possible to **ignite a match** or a piece of charcoal placed 3 to 5 cm above the device.
 - A **test tube is heated** by using wooded tongs and sweeping the entire length of the tube over the hot air stream.
 - **Containers such as Erlenmeyer flasks or flasks** can be heated by attaching them to our **601 ST metal rod** using a laboratory clamp (not sold by K-Factory). For multiple setups, 2 stands can be attached to the Microbio.
 - **Containers such as crystallisers or beakers** can be heated placing them on **our 403 SI glassware holder**. **These containers must not be placed directly on the surface of the Microbio as this could damage the appliance**, which could stop the convection currents and lead to abnormal overheating of the apparatus and damage to the resistors.



- **MICROBIOLOGY** : preheat for 2 minutes
 - To **warp a platinum loop**, insert it in the centre of the resistance and leave to heat up for a few seconds until incandescence is observed.
 - The appliance produces a **sterile space all around it**, mainly in front and to the sides. The radius of this sterile half-disc is between 15 and 30 cm.



MAINTENANCE

The appliance does not require periodic maintenance. In the event of pollution, the following precautions should be taken when cleaning :

- The appliance must be switched off and disconnected from mains.
- Cleaning should only be carried out when the appliance is cold. No maintenance of the electrical part is required.

REPLACING THE FUSE

1. The fuse must be replaced only with the device disconnected from its power source, and only by a competent electrician under the direction of the person in charge.
2. Remove the screw holding the fuse.
3. Remove and replace the fuse with an approved type F.5A.H250V fuse.
4. Reinsert the fuse, then close the flap and secure it.

5. TROUBLESHOOTING

If the **red** power light does not come on :

- a) Set the control knob to OFF.
- b) Disconnect from the mains.
- c) Turn the device over.
- d) Change the fuse (see REPLACING THE FUSE)
Type : 5-amp quick-blow fuse with high breaking capacity (250 volts)

If the appliance still does not work, please contact us.

Please note that any use of the appliance that does not comply with the manufacturer's instructions may compromise the safety of the MICROBIO.

-----3 YEAR WARRANTY-----