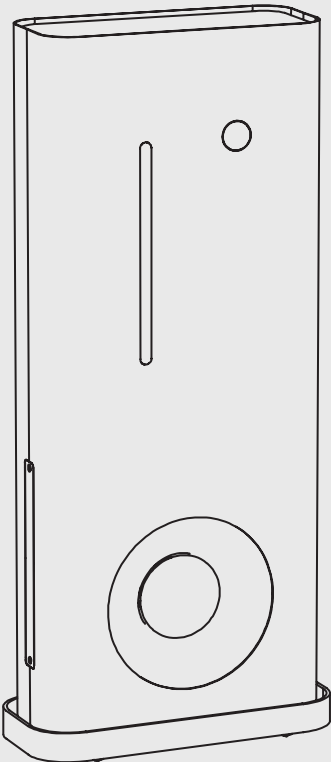


Instructions manual

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# UV-c air disinfection system

## Model Scarecrow 15



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## 1.1 Operating principle

UV-C light has a germicidal capacity that has been widely studied and proven.

The genetic information of viruses, bacteria, fungi and other microorganisms, responsible for their microbial replication, is stored in the DNA and RNA chains. UV radiation is an electromagnetic radiation capable of inhibiting the microorganisms' ability to replicate by causing photochemical changes in the nucleic acids (DNA and RNA) that make up the chains that keep their genetic information. It is a widely known method of disinfection and suitable for various types of viruses, including SARS-CoV. The point of maximum germicidal efficiency, when the DNA and RNA chains absorb a greater amount of radiation, corresponds to wavelengths of 260 nm, which coincides with the wavelength of UV-C light.

SCARECROW disinfection system generates constant forced ventilation in which the air in a room is recirculated, disinfecting it inside by UV-C radiation. The lamps are completely hidden so the absolute safety of the room to be disinfected is guaranteed.

## 1.2 Manufacturer

**This device has been manufactured by LEMAR LEBEN GROUP S.L.**

Contact address:

Pol. Industrial nº2 – C/ En proyecto, s/n

46134 Foios, Valencia, Spain.

Phone: (+34) 961490950

Web address: [www.lemarleben.com](http://www.lemarleben.com)

### 1.3 Technical specifications

UVC wavelength

**254nm**

UVC power radiation

**28 W**

Voltage +- 10%

**AC220v 50Hz**

Power

**215w**

Air flow

**6 m<sup>3</sup>/min**

Treated zone

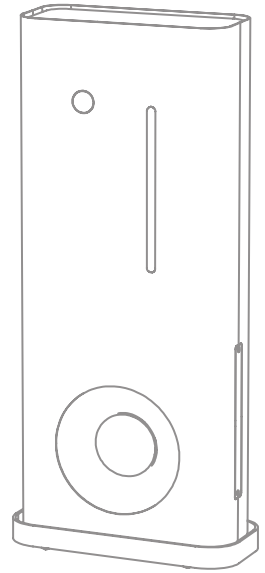
**0-250m<sup>2</sup>**

Weight

**48kg**

DIMENSIONS

**547 x 257 x 1243 mm**



- Structure: internal steel and external aluminum structure
- Standard programs: 10 working speeds
- Low energy consumption.
- Operation light sign and tactile button for program selection.
- Active carbon filter and HEPA 13 filter for a first mechanical filtration.
- UVC lamps ensure continuous circulating air disinfection.
- Work areas calculated with a height of 3 m.
- Completely safe device, can be used in the presence of people.
- With wheels for movement.
- 3 meters power cord included.

## 2. Product operation

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**Connect the machine to the electrical current** (220V AC, 50Hz). Always make sure that the equipment is on a stable surface before plugging in the connection cable. Preferably place in the center of the room to be disinfected.

**Press the power switch.** The tactile button will light up green.

**Select the desired speed** using the tactile button. 10 speed modes are available.

When the tactile button is pressed for the first time, speed mode 1 will start and the button will be illuminated with a blinking blue light. Pressing again, speed mode 2 will be selected and the light flashing will be faster. With each press the next speed mode will be selected and the flashing will be faster until it reaches speed mode 10 in which the maximum speed is achieved and the button will be illuminated with a fixed blue light.

Pressing the button again after reaching speed mode 10 the device will start again from speed mode 1.

To turn off the fans, press and hold the tactile button for 3 seconds

## Program error

If there is a failure in the fans, the tactile button will light up red and the device will stop working. Consult the manufacturer to fix it

If there is a failure in any lamp, the tactile button will light up red, but if it is pressed again, the device will work. Consult the manufacturer to replace the affected lamp.

## 3. MACHINE COMPONENTS

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### 3.1 Tactile button

By means of a tactile button it is possible to start and stop the operation of the device, as well as to change the operating speeds.

### 3.2 Active carbon filter and hepa filter

The Scarecrow does a first mechanical particle filtration and odor removal. For this it has an active carbon filter and a HEPA H13 filter. With this first filtering, the air particles with a size equal to or greater than 0.3 microns are already retained.



### 3.3 Air circulation

The device has a 7-blade axial fan for sucking the air of the room to disinfect it inside and two radial fans to expel it. The air flow produced is 6 m<sup>3</sup> / min. The maximum sound level, produced at maximum speed, is 60dB.

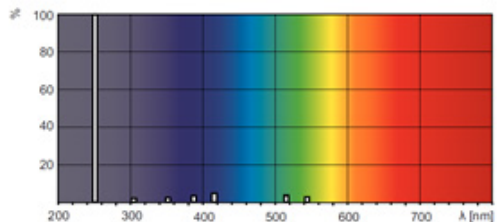
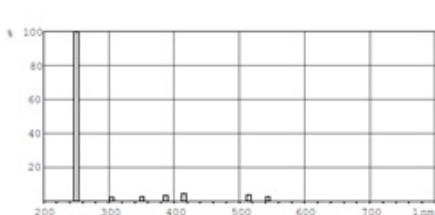
10 working speeds are available.

### 3.4 Lámparas UV-c

These lamps emit UV-C radiation with a wavelength of 254 nm, which is why they have a germicidal capacity for viruses, bacteria and other microorganisms. Being inside the machine, the use of the device is safe with people inside the disinfected room.

As they do not have wavelengths less than 250 nm, the lamps do not produce ozone

Photometric data:



## 4.MAINTENANCE

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Clean the device with non-abrasive products. Always with a damp cloth, never with a spray bottle, to prevent the electronic components from getting wet and causing internal short circuits.



Do not force the equipment and follow the instructions in the manual to work safely.



Do not pull the main wire to disconnect the device. It is recommended to inspect it periodically and change it in case of deterioration.



Unplug the device when not in use or when cleaning.



Any damaged part should only be replaced by the manufacturer. If the device is disassembled or shows manipulation signs without the consent of the manufacturer, the product warranty will be lost.



Lamps must be replaced after 9000 hours of use (they will present a 25% emission drop). In order to maintain the efficiency of the system, it is recommended to change them every 7000 hours. This work can only be carried out by qualified personnel. Check with the manufacturer.

- Lamps contain Mercury.
- They must be disposed of in a specialized clean point.





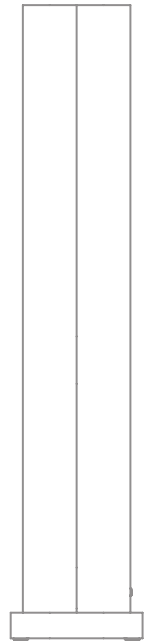
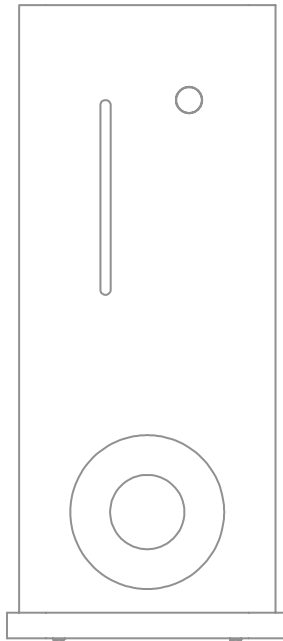
The active carbon filter must be replaced after 12 months of use. Consult the manufacturer for a replacement.



The HEPA 13 filter must be replaced after 12 months of use. The filter can be changed by non-specialized personnel. Consult the manufacturer for a replacement.

### Warning

Make sure that the machine is electrically disconnected before replacing any filter. The HEPA 13 filter must always be mounted in the innermost part.



## **5. PRODUCT APPLICATIONS**

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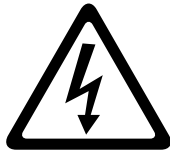
This device is useful for the disinfection of viruses, bacteria, fungi and other microorganisms in closed rooms up to 250 m<sup>2</sup>.

**Suitable for commercial areas, hospitals, clinics, laboratories, residences, schools, shops, restaurants, coffee shops, hotels, spas, beauty centers, hairdressers, gyms and sports centers.**

## **6. Safety recommendations, indications and warnings**

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This device works with lamps that generate UV-C radiation. This radiation produces harmful effects on the skin and eyes. It can cause skin erythema, conjunctivitis and / or photokeratitis (cornea's inflammation).



**Warning:**

The device cannot be opened while it is in operation. To replace the lamps, consult the manufacturer.

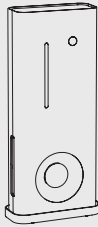
Do not apply UVC radiation to disinfect hands or any other skin area.

When working with UVC radiation, face shields or specific safety glasses (Standard EN166 and EN170) must be used and the skin must be covered with laboratory coats and nitrile gloves.

In case of exposure to UVC radiation, it is recommended to consult an ophthalmologist if eye damage is suspected and to treat skin lesions immediately.

Always use this device connected to a protected electrical line with a differential of at least 30 mA.

When moving the device it is recommended to apply force to the lower half of the device body. If it is pushed from above there may be a risk of falling over.



**WIZARD**