



MEDIROLL

innovative solutions

GE2020 GE2020M

**germicid lamps
manual**



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GE-2020 Germicidal lamp Manual

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1 INTRODUCTION

This manual is for the GE-2020 germicidal lamp.

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Tel.: +447871929540
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Web site: www.mediroll.hu

1.1 Purpose of the device

The GE-2020 germicidal tube is suitable to sterilize indoor air and to maintain the sterile state of sterile devices and materials. It also disinfects the air of work spaces, packaging areas and sterile cabins, destroys and reduces fungus spores.

1.2 Principal of Operation

UV emission

The wavelength of the UV rays are shorter than the wavelength of visible light. We measure it with nanometer (nm) which is 1 billionth of a meter. The spectrum of visible light is approximately between 400-700 nm, ultra violet light is between 100-400 nm. The spectrum under 280 nm is called germicidal wavelength and this can be used to destroy bacteria and viruses.

UV effect

The 200-300 nm wavelength effectively destroys microorganisms such as bacteria, virus, fungus and mold spores (both on surfaces and in the air). Today's most frequent pathogens, like the flu, legionnaires` disease, salmonella, hepatitis, etc. can all be destroyed by the appropriate dose of UV-C radiation – just like anything else that has a DNA molecule.

The disinfecting effect of the UV-C light is based on photochemical procedure.
The UV light destroys the DNA of viruses and bacteria and it prevents their reproduction.

The effectiveness of the UV-C light depends on the intensity and the duration of its usage.

The low pressure germicidal lamps give 90% of their released light on a 253,7 nm wave length. This wave length is very close to the peak (256 nm) which is the most effective against microorganisms. Therefore these lamps are often used to cleaning liquids and air, such as: in food industry, bottling, medical devices, medicine production, etc.

Advantages of the UV-C light

Environmentally friendly, no need for hazardous chemicals, not possible to overdose.
It is low cost both for buying and maintaining. Immediate effect, the pathogens cannot become resistant.
Its maintenance is simple – occasional cleaning and yearly bulb replacement is required.

1.3 Safety Instructions

The GE-2020 Germicidal lamps are under Safety Class 1, their installation do not require special safety measures.

To guard against injury, basic safety precautions should be observed, including the followings:

- Utility power supplied to the fixture **MUST** match power requirements listed on the fixture label
- Make sure the plug and the cable is undamaged
- Do not use this fixture for other than its intended purpose, as described in this manual
- Clean the device regularly according the safety measures
- Keep the fixture in a dry place (do not mount under any source of moisture or condensation)
- Keep the device away from heat, sharp edges, rough surfaces and make sure of the good state of the cable.
- Do not use the device in a strongly dusty environment.
- Do not use the device in a strongly shaking environment.
- Do not use the device in an environment where liquid can spill on it
- Make sure the appropriate circumstances are supplied



Caution! The device is fragile. It needs to be protected from external damage (e.g.: being dropped or hit)

- Do not alter design or construction
- The device is not protected against explosive gases
- Liquid must not get into the device (or its accessories) when cleaning or disinfecting
- Do not put any metallic material in the device as that can cause damage
- Germicidal ultraviolet rays may break down plastic, rubber or other non-metallic materials, with inadequate resistance to ultraviolet. Shield all plastic, rubber or other non-metallic parts
- **Caution!** Even short exposure can cause burning on the skin, and is especially dangerous to the eyes.

2 Installation

2.1 Connections:

The device has a network switch that shines red when turned on.

Connectivity: Alternate current is needed for the operation that is secured by a network connector. Must be operated with proper electrical ground!

Lamp unit: lamp body, reflector and 1 piece of germicidal bulb (tube)

Pole with wheels: fixed pole and rolling base

2.2 Installation

Fixing on the wall

Remove the GE-2020 lamp from its shipping packaging and then do the following:

- Fix the contact pins of the lamp on the wall at a 528 mm (approximately 20.787 inches) distance from each other (2 pieces). Place the lamp high enough to be out of reach.
- Remove the germicidal tube (covered by paper) from the reflector
- Carefully remove the protective foil from the reflector
- Fix the lamp to the contact pins with the reflector facing the ceiling.
- Remove the bulb from the paper packaging
- Slide the germicidal bulb into the sockets on both ends and turn it by 90° in order to fix it
- Plug the device into the appropriate network socket (do not operate without proper electrical ground)
- Switch the device on with the power button (do NOT look into the bulb)
- If you are using a timing switcher, connect the device to the switcher and then connect the switcher to the network.
- Set the time for switch on and off
- Turn the device on with the power button

Assembling the mobile device

- Put the wheels into the legs
- Unscrew the fixing screw and disk at the end of the pole
- Place the pole in the whole at the centre of the X legs
- Screw the screw into the pole through the disk and tighten it with an Allen key size 6
- Remove the germicidal bulb from the reflector
- Carefully remove the foil from the reflector
- Fit the 4 screw heads on the back of the lamp onto the 4 nest on the pole.
- Fix the lamp through the whole on the back of the pole with the M8 screw (use the Allen key)
- Remove the bulb from the paper packaging
- Slide the germicidal bulb into the sockets on both ends and turn it by 90° in order to fix it
- Plug the device into the appropriate network socket (do not operate without proper electrical ground)
- Switch the device on with the power button (do NOT look into the bulb)
- If you are using a timing switcher, connect the device to the switcher and then connect the switcher to the network.
- Set the time for switch on and off
- Turn the device on with the power button



Attention! UV-C radiation is dangerous to humans and animals equally, therefore it can only be used when and where no one is within radiation reach. Even a short exposure (direct or indirect) can cause burning on the skin and is extremely dangerous for the eyes. Make sure you take these into consideration when installing the lamp.

2.3 Operating /suggestion/:



Attention! Protect the device from mechanical damages.
When moving the lamp on a slope or over a threshold pay extra attention not to drop it.
You **MUST NOT** cover the lamp when operating.
You **MUST NOT** touch the lamp when operating as it can be hot.

The device can be switched off by the power button, and can be annealed by unplugging it from the network socket.

Further information

It is the user`s responsibility to determine and validate the suitability of this equipment for use in the user`s system or process.

No warranty or representation is made by the manufacturer with respect to suitability or performance of this equipment or to the results that may be expected from its use.

This device freshens the air but this does not mean that it replaces regular airing. Do not alter the design or construction in any way. The manufacturer cannot be taken responsible for any errors that are resulted by altering the device. It needs to be kept out of reach of children and animals.

3 MAINTENANCE

Maintenance instructions are guiding the electrical staff.

3.1 Signs, symbols, labels

The label on the back of the device contains the manufacturer`s name and address, the device`s type, serial number, voltage and output. Further symbols on the label:



Safety Class 1 device



The symbol of the relevant harmonized standard



The manufacturer



The unique serial number of the device



The device releases ultraviolet light



You must read the manual before using the device



This symbol is used to identify components which must not be disposed of in trash. Disposing otherwise could be harmful to the environment
The used bulb must be treated as hazardous garbage!

3.2 Troubleshooting

There is no special troubleshooting required apart from the regular cleaning of the lamp.

Potential errors:

Problem	Potential cause	Corrective Action
Fixture not operating	There is no electrical power	Verify that the fixture is connected to a live power source
	Power connection, to fixture loose or disconnected	Verify power connections to fixture are fully engaged. In case of rupture, replace it.
Germicidal lamp not operating	Germicidal bulb burnt out	Replace germicidal bulb
	Device not functioning	Send it back for service

Always disconnect power to the fixture before performing any service or maintenance.

If you need to replace the bulb, do the following:

- Turn the bulb 90 degrees so you can remove it from the lamp holder
- Place new bulb in and turn in 90 degrees inside the lamp holder

The expected life span of the germicidal bulb is 9000 hours (depending on the producer) which is normally reached under a year of constant usage. After this its effectivity goes down to 80% and a replacement is recommended.

If the bulb breaks, air the room for 30 minutes, remove the bulb together with the broken pieces, wearing protective gloves. Place the parts into a plastic bag and seal it. The broken bulb is to be treated as dangerous garbage. Broken bulb can be sharp.

Cleaning and disinfecting:

Always disconnect power to the fixture before performing any cleaning!

The external surfaces are to be cleaned when necessary with a wet wipe.

Dust or visible dirt on the reflector are to be cleaned with a dry material.

After cleaning, DO NOT operate the device immediately, the recommendation is an hour drying.

3.3 Storage

Storage conditions

Air temperature: -10 °C ÷ +50 °C

Relative humidity: 10-95% non subsiding

Air pressure: 950 ÷ 1060 hPa

If the device is exposed to extreme temperature during storage, it is important to keep it in the intended operating space for a few hours before turning it on.

4 TECHNICAL SPECIFICATIONS

Germicidal Tube

Type:	TUV 30 W germicidal bulb
Power:	30W
Ultraviolet radiation:	12W
Amperage:	max.0.2A
Effectivity:	0,2 ...0,4 W/m ³
UV-C diffusion (100 hours)	12.0 W
Wavelength:	253,7 nm,
Ray density from 1 meter:	100 μW/ cm ²
Diameter:	28 mm
Expected life span:	min.9000 hours
Effectivity:	25 m ² space

Electrical Data:

Safety Class:	I.
Protection degree:	IP - 20
Network tension:	230VAC ~ 50Hz

Mechanical Data:

Size:	928 mm x 155 x 75 mm
Weight:	max. 3.5 kg
Height of pole:	1550 mm
Weight of rolling pole:	max. 3 kg

4.1 Parts

Fixed lamp:

- 1 lamp body
- 1 germicidal bulb (tube)
- 2 safety pin
- 1 timer

Mobil lamp:

- 1 lamp body
- 1 germicidal bulb (tube)
- 1 timer
- 1 set of legs (5 wheels)
- 1 pole
- 2 pieces of M 8x30 screws
- 1 disk
- 1 Allen key size 6

5 CE RELEVANT STATEMENT

Manufacturer: MEDIROLL Ltd.
 4025 Debrecen
 10 Postakert street, Hungary

In the name of the manufacturer I state the product below

Name	Type	Serial Number
GERMICIDAL LAMP	GE-2020

is compliant with the relevant secure usage and the standards.



In case of proper usage it cannot risk the health and safety of the operator or others.

The product has a CE sign in accordance with the **23/2016. (VII. 7.) NGM standard**

List of standards and guidelines:

CE Guideline	2014/35/EU harmonized standard (LVD)
Applied harmonized standards	MSZ EN 60598-1
	MSZ EN 61010-2-040

Debrecen,

I.s.

Cseke István

6 WARRANTY

We warrant this product to the original owner to be free from defects in material and workmanship when installed in accordance with Civil Code for a period of time as follows:

12 months– this commences from the day the product is delivered

This warranty will not apply to any product, which has been subject to:

- Misuse, negligence
- Improper storage, breakage, dropping
- Improper network tension burning out the germicidal tube
- Improper installation
- Natural disaster

Under no circumstances shall MEDIROLL Ltd be liable for any incidental, consequential or special damages, such as:

- Service not performed by MEDIROLL Ltd
- Modification or repair by an unauthorized person that could affect the device`s stability and reliability
- Misuse or negligence, that resulted in accident
- Modified, unreadable serial number

Within the warranty period we shall repair or replace the products, which are returned to us with shipping charges prepaid and which are determined by us to be defective. The shipping charges and proper packaging is the responsibility of the customer.

Contact the distributor or the manufacturer directly in need of warranty. In case of a potential debate, you have the right for further actions.

ATTENTION! In case of a claim, we need the serial number of the device and the date of purchasing.

Last review of this manual: 2020.04.13.

7 WARRANTY CARD

Manufacturer: MEDIROLL Ltd
4025 Debrecen, Postakert street. 10

Product name: **GERMICIDAL LAMP** MODEL: **GE-2020** Serial Number (SN):

Seller`s signature, stamp

l.s..

.....
Seller
Upon purchase we issue a 12 months warranty

Warranty will be only issued with the warranty card and confirmation of purchase present.

IN CASE OF REPAIR, FILL THIS:

Date of the claim for warranty:
Date of return shipping:
Reason for repair:

Way of repair:

Way of shipping back to the customer:
New deadline of warranty:

IN CASE OF REPLACEMENT, FILL THIS:

Date of replacement: