



Air Sanitizer and Mixer



Manual for Installation, Use and Maintenance





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Information for the End User

This instruction manual is part of the product and has to be easily accessible by the end user and maintenance qualified and trained personnel.

The end user and maintenance qualified and trained personnel must be familiar with all the contents of this instruction manual before the product is put into service.

In case of loss or damage of the instruction manual, request a copy to the Manufacturer.

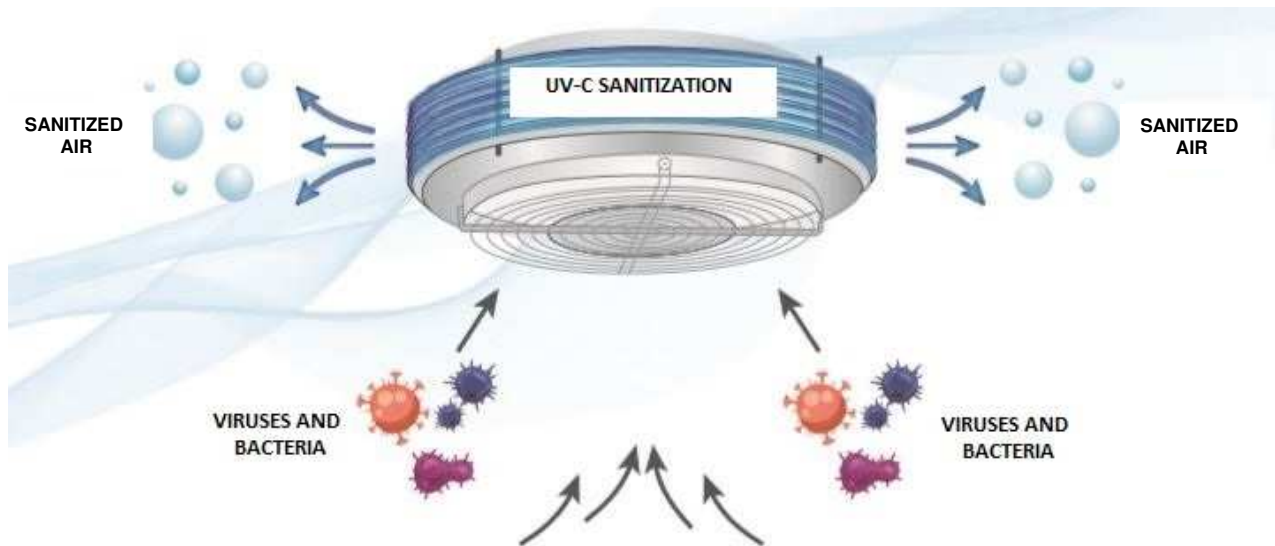
ELITURBO UV-LIGHT® - Product Introduction

ELITURBO UV-LIGHT® is designed to perform the double function of air sanitizer and air mixer. The sanitization process involves a germicidal activity for the reduction of bacterial and viral loads in the air. Sanitization takes place in a special chamber where ultraviolet light (UV-C) lamps are housed and where the contaminated air taken from the environment goes through. The air is irradiated by UV-C rays that damage the nucleic acid of viruses and bacteria by deactivating their DNA.

The sanitization chamber is equipped with UV-C shielding appliances.

Air sanitization using UV-C ultraviolet rays is an economical and efficient method.

ELITURBO UV-LIGHT® also acts as an air mixer, further improving the environmental conditions and the healthiness of the microclimate of the room where it is installed. This function is made possible by the particular design of the lateral circular deflectors that distribute the sanitized air at 360° around the appliance. The incoming and outgoing air flow is managed by a compact and silent fan unit.



This Product is compliant with the following European Directives:

- EMC Directive 2014/30/UE
- Machinery Directive 2006/42/CE
- Low Voltage Directive 2014/35/UE
- RoHS Directive 2011/65/UE

1 - General Information

1.1 SAFETY WARNING – ARTIFICIAL OPTICAL RADIATION -R.O.A.

Before proceeding with the installation of Eliturbo UV-Light®, carefully read the following report issued by the laboratory that carried out the R.O.A.

SUMMARY OF THE TECHNICAL REPORT FOR MEASURING OPTICAL RADIATIONS

(by UNI EN-12198-1)

This report shows the results of the measurements of Artificial Optical Radiation carried out in specific locations during the investigation phase on Eliturbo UV-LIGHT produced by Impresind s.r.l. The measurements were performed at the Impresind by the FRIEST company with the certified instrumentation JETI GMBH & Delta Ohm, of their mobile laboratory, standardized with the USL legislation.

Target

This survey aims to carry out technical measurements in specific defined locations, around the devices taken into consideration, to determine the amount of non-ionizing electromagnetic radiation emitted by them in order to categorize the machines according to the following fundamental steps:

- 1. Definition of the category** of assignment to device under consideration according to the Italian Standard UNI EN 12198-1. **Assigned category: 2**
- 2. Direct measurement** of irradiance and (spectral) radiance, at the points of possible maximum exposure of the operator due to the (expected or unexpected) leakage of optical radiation. **(Legislative Decree 81/08)**
- 3. Comparison** with the exposure limit values set by current regulations. **(Legislative Decree 81/08)**

The device (Eliturbo UV-Light) was positioned **at 2,5 m. height from the floor** as indicated by the installation instructions supplied with the appliance it self .

Three positions were identified, considered critical for exposure, in which it is assumed that the operator may be in normal operating situations:

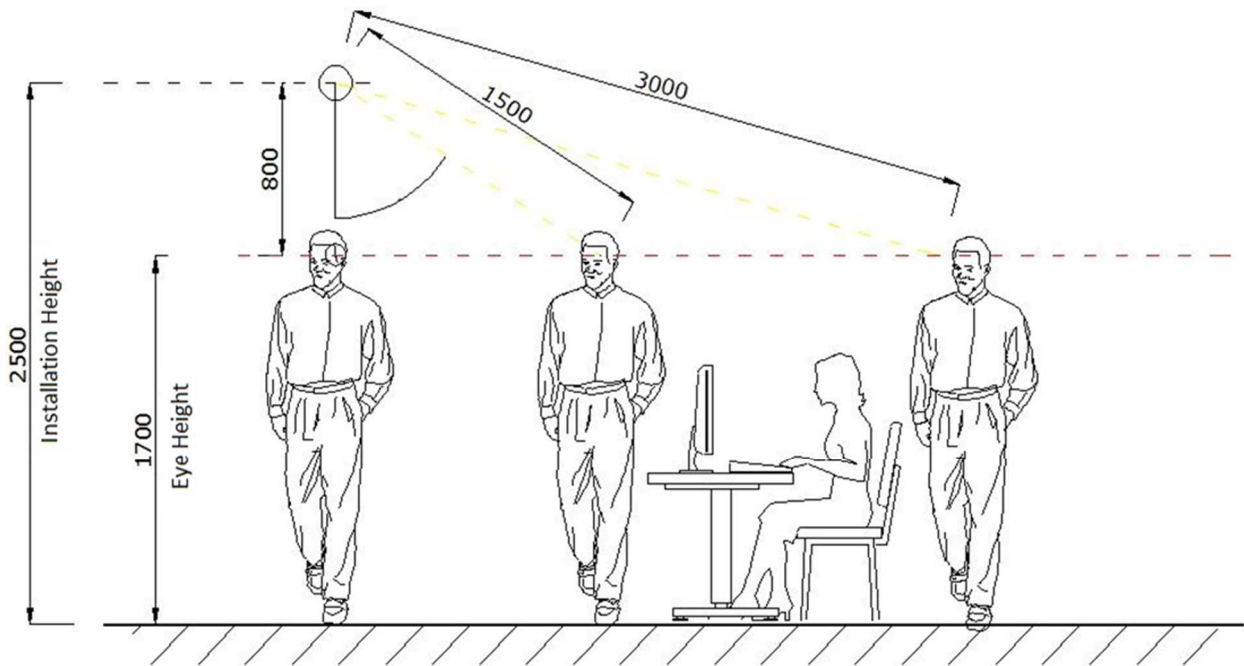
- 1) under the appliance;
- 2) sideways to the device in an upright position at a distance of about 1,5 m;
- 3) sideways to the device in an upright position at a distance of about 3,0 m.

VALUES MEASURED IN ACCORDANCE WITH Legislative Decree 81/08 (maximum exposure times for the UV range – Limit “a” Annex XXXVII Tab. 1.1 – Operator eyes height : 1.7 m).

	Position operator	Distance Operator	Irradiance Weighted J/m2	Dt Applied	Max Time Exposure	Limits Apply (L.D. 81/08, All. XXXVII Tab. 1.1)	Curve	Limite Value J/m2
1	Under Appliance	80 cm.	4.277E+0	8 hours	> 8 hours	Point “a”	Sλ	30
2	Sideways Device	150 cm.	6.563E+0		> 8 hours			
3	Sideway Device	300 cm.	5.757E+0		> 8 hours			

WARNING:

The installation position of the Eliturbo UV-LIGHT must ensure that the distance from the people staying in the room are respected as indicated in the image below, in any case at height of not less than 2,5 m from the ground.

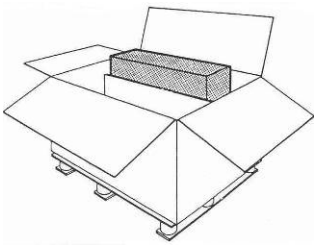


SAFETY WARNING:

- The appliance contains UV-C lamps.
- DO NOT turn-on the UV lamps with the appliance open or when they are removed from the appliance.
- The appliance must be used only for the purpose for which it was designed. Any other use is considered non-compliant and therefore dangerous.
- UV-C radiation can cause eye and skin damages, even if absorbed in small doses.
- The personnel assigned to installation and maintenance operations must be equipped with individual protection appliances such as goggles with a minimum protection index 2C-1.2.
- Read the maintenance instructions before opening the appliance.
- The appliance must be turned-off and disconnected from the power supply before carrying out any operation on it.
- The appliance, if damaged, must not be used.
- In case of breakdown or malfunction, the appliance must not be tampered with. Contact specialized technical personnel for maintenance / repair operations.
- The appliance must not be used outdoors; it must only be used indoors.
- Keep children away from the appliance; children cannot play with the appliance.

1.2 Receiving the equipment

When receiving the package check the integrity of the packaging and the contents inside. The appliance, if damaged, must not be used.



Check the package and its content. In case of damage due to the transport, claim the damage on the transport document countersigned signed by the carrier and send a scanned copy of it to the manufacturing company by email to info@impresind.com.

1.3 Storing

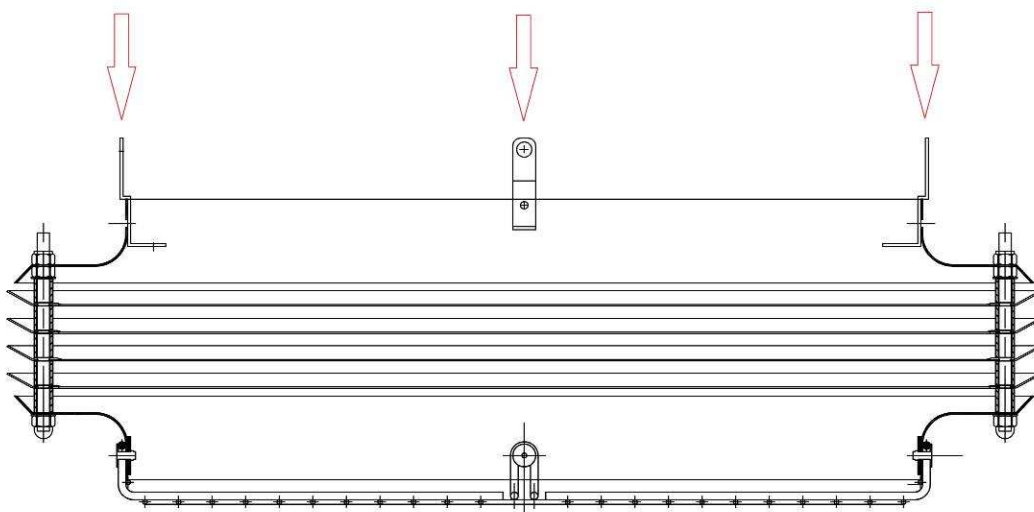
- During transport and storage the temperature must be between -10°C and $+50^{\circ}\text{C}$.
- If the appliance needs to be stored, the relative humidity in the warehouse must not exceed 90%

1.4 Unpacking

- Take the appliance to the installation site.
- Make the appliance free of its packaging materials and collect them in order to prevent dangers for people and/or animals.

1.5 Handling and Transport

- Pay attention when handling the appliance during unloading from the means of transport, handling and positioning, in order to avoid damaging of the product and its internal components.
- Handle the appliance with care, avoiding to interfere with the circular deflectors and avoiding any action that could damage the internal components.
- Lift the appliance using the dedicated supports (see picture below) avoiding to touch and stress the circular deflectors.
- Do not handle the appliance by grabbing the upper inspection cover.



2 - Product Specifications

2.1 Technical specifications

MODEL CODE		UVL100
Technical data		
Absorbed power	W	90
Power supply	V	220-240
Frequency	Hz	50 / 60
Fan type		axial
Airflow	m ³ /h	100
Sound Level (Lp)	db(A)	35
Ingress Protection level	IP	20
Dimensions		
Diameter	mm	680
Height	mm	260
Weight	kg	10
Surface treatment		powder coating
Sanitization		
UV-C Lamps	W	2 x 36W
Lamp lifetime	h	≤ 9000
Radiated power	W	21,6
Radiation Emission Category (UNI EN 12198-1/2009)		2

2.2 Intended use*

ELITURBO UV-LIGHT® is intended to be installed in any closed environment, where air sanitization and mixing are needed.

Examples of application:

- ✓ industrial and commercial premises
- ✓ medical premises
- ✓ offices
- ✓ warehouses
- ✓ dressing rooms
- ✓ meeting rooms, canteens
- ✓ churches, libraries, museums, exhibition booths, etc.

*It is recommended to have the risk assessment carried out by your security manager

2.3 Improper use

IT IS STRICTLY FORBIDDEN TO USE THE APPLIANCE FOR DIFFERENT PURPOSES THAN THE SPECIFIED ONES (par. 2.2)

IT IS STRICTLY FORBIDDEN TO INSTALL THE APPLIANCE IN EXPLOSION HAZARDOUS AREAS AND/OR ROOMS WITH VAPOURS CONTAINING HIGH CONCENTRATIONS OF HALOGENS.

IT IS STRICTLY FORBIDDEN TO HANG OR PLACE ADDITIONAL WEIGHTS ON THE APPLIANCE.

3 - Installation

3.1 General instructions for the installation



Before the installation, the qualified and trained personnel must read this manual and wear personal protective equipment (PPE) such as safety glasses (scale number 2, 2C or 3 according EN166), gloves, etc...

Before proceeding with the installation, make sure that all the components are unpacked and not damaged.

Installation and commissioning must be carried out by qualified and trained personnel only and in observance for the local laws.

3.2 Positioning of the appliance



ELITURBO UV-LIGHT® must be installed at minimum height of 2,5 meters from the floor. In presence of accessible mezzanine, check that the appliance is positioned at a safety distance not lower than 2,5 m from the mezzanine floor.

UV radiation may cause severe damages to eye and skin, even in low doses.

Before positioning the appliance, identify the point of its installation and check that it does not interfere with any system / device or mean used for lifting loads in normal work operations (lifters, jib cranes, lamps, etc.).

It is recommended to hang the appliance from the ceiling, or from a beam, and to perform a structural analysis of the identified installation support, in order to avoid any risk of falling of the appliance.

Hang from the ceiling by means of steel chain with wire diameter not less than 3,5 mm or by means of adequately sized steel cords.

As general rule,

supporting devices must be capable of withstanding a mass equivalent to 5 times the mass of the appliance distributed over the attachment points (see chapter 2 – Product specifications)

Make sure that the appliance is installed perfectly horizontal.

3.3 Connection to power supply network



The connection to power supply network must be carried out by qualified and trained personnel, after reading this Installation, Use and Maintenance Manual.



Before carrying out the power supply and/or control connections it always necessary to check that the power supply is disconnected.

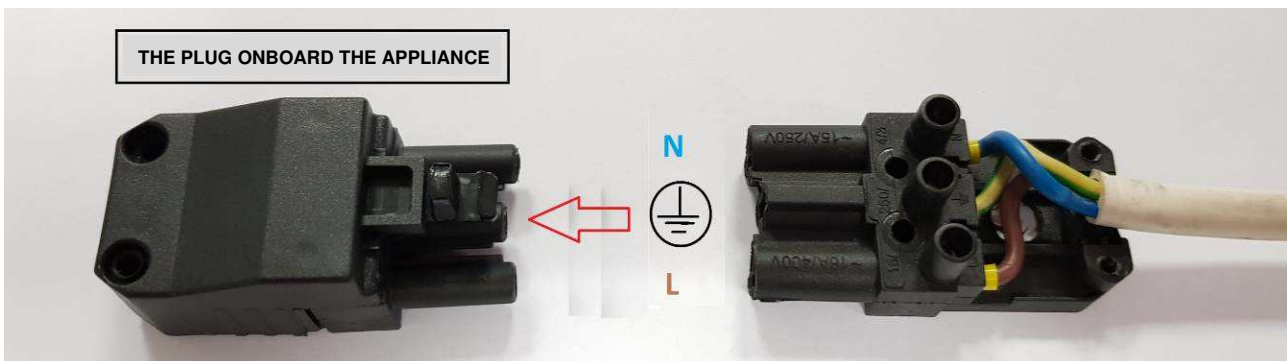
The connections to the power supply network must be carried out by qualified personnel, duly informed.

The electrical system must be carried out in compliance with the local current regulations. Check the efficiency of the grounding system!

Expected power supply:

- 220-240 V - Single-phase - 50/60 Hz (See chapter 2 – Product specifications)

Connect the appliance by installing, before the appliance, an omnipolar switch having a minimum distance between contacts of at least 3 mm per each pole, positioned in a place that can be easily reached by the user.



The connection to the plug onboard the appliance is the responsibility of the installer (see image above).

3.4 Operation checks



Before switching-on the appliance, make sure that all the staff involved have been properly informed about risks and dangers of the appliance itself, as reported in the present manual.



Before switching-on the appliance, check that all the supporting elements (chains, cables, etc.) are firmly fixed, that the appliance is perfectly horizontal, that the power supply cables do not interfere with any object and that the appliance is properly powered.

Immediately disconnect the power supply if any anomaly occurs.



Before switching-on the appliance, make sure that all the staff involved have been properly informed about risks and dangers related to the presence of ultra-violet lamps inside the appliance, pointing out the harmfulness due to exposure to their radiation without the correct personal protective equipment (PPE)

UV-C radiations may cause severe damages to eye and skin, even in low doses.

Turn the appliance on and check that:

- there are no vibrations or abnormal movements of the supporting elements: if this is the case, immediately disconnect the power supply and check the correct fastening of the anchoring devices;
- the appliance does not produce abnormal noises: if this is the case, immediately disconnect the power supply and find out the causes (check the correct fastening of the top cover and the correct installation/fastening of the internal components);
- both UV lamps are working properly, without any malfunction: if this is the case, immediately disconnect the power supply and check the correct installation of the UV lamps

In case of any other anomaly / malfunction, immediately disconnect the power supply and stop the appliance.

In the event of continuation of anomalies or malfunctions, immediately contact the Manufacturer's Technical Dept.

4 - Residual risks

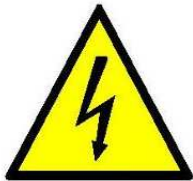
The possible residual risks of the appliance are listed below. All the staff involved must be properly informed about risks and dangers related to the appliance.



ATTENTION : UV-C Lamps installed inside the appliance.
Do not approach and do not stand near the appliance if it is in operation. Exposure to UV radiation is potentially dangerous. Any activity in close proximity of the appliance must necessarily take place with the appliance switched-off.



For any maintenance activity (e.g. cleaning or works near the appliance) lamps must be switched-off and the personnel must wear the appropriate PPE, such as safety glasses (scale number 2, 2C or 3 according EN166), gloves, etc...



ATTENTION : Before carrying out any operation on the appliance or in close proximity of it, disconnect the power supply.
It is absolutely forbidden to remove the top cover with the appliance on.



ATTENTION : Do not use liquid cleaners to clean the appliance.

5 – Emergency situations

In case of emergency:

- immediately switch-off the appliance and disconnect the power supply by opening the electric circuit of the omnipolar-switch
- identify and eliminate the problem by analyzing the causes that originated it
- if the problem persists, contact the IMPRESIND's Technical Dept.
- IT IS ABSOLUTELY FORBIDDEN TO USE WATER TO EXTINGUISH FIRES

6 - Use

6.1 Switching on / Switching off

Switch on and off of the appliance is carried out by using the appropriate devices set up during the installation phase: eg. omnipolar switch and/or timer.

6.2 Recommendations to Users

In order to better counteract the natural proliferation of microorganisms, EITURBO UV-LIGHT® must work continuously.

If correctly installed (see chapter 3 – Installation) the appliance requires no particular recommendations other than those relating to the safety of qualified personnel in carrying out ordinary and extraordinary maintenance activities (see chapter 4 - Residual risks).

6.3 Putting the appliance “at rest”

ELITURBO UV-LIGHT® is a product that can be used in any season. If it is deemed to end its operation due to non-use, the appliance can be placed at rest by removing the power supply through the main circuit breaker.

7 - Maintenance



ATTENTION : All maintenance operations must be carried out exclusively by qualified and informed personnel.

WARNING : before proceeding with any ordinary and extraordinary maintenance operation, check that the appliance is not electrically powered.

Check the proper functioning of the appliance yearly, so that it is possible to carry out any needed maintenance and/or repair in due time. In particular, it is recommended to check:

- current absorption and safety devices of the appliance;
- the good conditions of the hanging systems;
- the good connection of the lamps and their condition (useful lifetime max. 9.000 hours)
- the cleanliness of the appliance and, in particular, the cleanliness of the protection shielding.

Use adequate cleaning products that do not affect or compromise the materials of the appliance and the electrical cables.

In order to perform the maintenance properly, remove the upper cover by unscrewing its screws, as illustrated in the following pictures.

Unscrew the fixing screws on the upper



Remove the upper cover

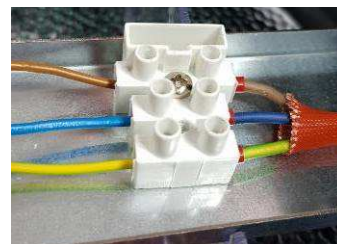


Once the upper cover is removed, all the internal components become accessible (see pictures below).

Press the red button to remove lamp from the lampholder



Remove the fuse holder to access the fuse (fuse 5x20 2A)



8 - Disposal

8.1 Decommissioning

Disposal of the appliance *must be carried out by specialized personnel provided with suitable tools and* Personal Protection Equipment (PPE).

INFORMATION ABOUT END OF LIFE DISPOSAL



Attention:

This product is within the scope of Directive 2012/19 / EU concerning the management of waste electrical and electronic equipment (WEEE).

The appliance is intended for professional use only, therefore it must not be disposed of together with household waste, since it is made up of different materials that can be recycled at suitable facilities.

The product is not potentially dangerous to human health and the environment, as it does not contain harmful substances, but if abandoned in the environment it has a negative impact on the ecosystem.

Read the instructions carefully before using the appliance for the first time. It is recommended not to use the product for any purpose other than that for which it was intended, as there is a danger of electric shock if used improperly.






The crossed-out bin symbol, present on the label placed on the appliance, indicates the compliance of this product with the legislation on waste electrical and electronic equipment (WEEE).

The abandonment of the equipment in the environment or its illegal disposal are punishable by law.



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