

## Installation/Operating/Maintenance Instructions

# LTG Air Disinfection

**steril**  
ventilation

Recirculated air disinfection unit  
type UVC-400/DI/115/24 *SterilVentilation*



Ceiling installation



## Notes

### Dear customer,

Thank you for considering the use of the LTG UVC-400/DI *SterilVentilation* recirculated room air disinfection unit for your safety.

It is well known that the risk of infection due to viruses, bacteria, and mould spores in rooms increases where an adequate supply of fresh (outdoor) air cannot be guaranteed. This issue is particularly severe in highly used areas (e.g., offices and meeting rooms, reception/waiting areas, day-cares/schools, treatment/care facilities, restaurants/hotels, event/sports facilities, airport terminals and transportation hubs or retail outlets) that have inadequate or low supplies of fresh air delivered via the HVAC or mechanical ventilation system.

The recirculation room air disinfection unit UVC *SterilVentilation* was developed for this use. It is an innovative device (patent pending) that reliably inactivates respiratory (airborne) pathogens contained in the room air with UV-C radiation.

Developed using our tried and tested LTG fan and flow technology, it also meets our high requirements for low acoustics, good air distribution & comfort.

### Notes

All dimensions in these Installation, Operating & Maintenance instructions are given in inches.

The sizes indicated in this operating manual are subject to the general tolerances in accordance with DIN ISO 2768-cL.

Any additional information can be found in the drawings.

Straightness/twist tolerances are in accordance with DIN EN 12020-2.

### Content

	Page
<b>1. Safety</b>	5
1.2 Safety Notes	3
<b>2. Delivery, Storage, Transport</b>	5
2.1 Transport Instructions	5
2.2 Delivery	5
<b>3. Function, Features</b>	6
3.1 Intended Function	6
<b>4. Technical Data</b>	7
4.1 Dimensions, Device Structure	7
4.1.1 Diffuser Borders	7
4.2 Technical Data	8
<b>5. Installation</b>	8
5.1 Installation Instructions	8
5.2 Electrical Connection	10
<b>6. Commissioning</b>	11
6.1 Adjusting the Fan Speed (Air Flow Rate)	11
<b>7. Operation, Maintenance, Servicing</b>	12
7.1 Changing the UV-C Low Pressure Lamp (UVC Lamp)	12
7.2 Cleaning	14
<b>8. Troubleshooting</b>	14
<b>9. Spare Parts</b>	14
<b>10. Decommissioning, Disposal</b>	14

## Safety

### 1. Safety

Please read this manual with care before installing, commissioning & operating the device and keep it for future reference.



Installation and maintenance of this device must be performed by a trained installer, electrician & maintenance technician to achieve reliability, safety, and optimum performance.

#### 1.1 Explanation of Symbols and Notes

##### Work safety symbol



This symbol is placed with all work safety notes in these instructions that pose a danger or hazard to life and limb of persons. Observe these notes and act with special care in such cases.

Train all personnel on these work safety notes. These notes and warnings are in addition to the normal general safety and accident requirements mandatory by code.

##### Information notes



This information symbol is placed in these instructions and must be followed to comply with the directives, provisions, notes and the correct sequence of work, and to prevent damage to the unit and/or other plant parts.



These requirement symbols are connected to the work safety notes and show which safety measures must be complied with at the corresponding workplaces, and therefore require a specific behavior, for example as shown here: Use hand protection.



These prohibition symbols are connected to work safety that prohibit dangerous or risky behavior, for example as shown here: Do not touch.

### 1.2 Safety Notes

The UVC *SterilVentilation* must only be installed, operated, serviced, repaired, disassembled, and disposed of after careful study of these instructions! The safety instructions must be observed! The device complies with UL 507 & IEC-62471 as well as the standard safety code and requirements observed in Europe.



The assembly, installation, maintenance, repair, and disassembly of the UVC *SterilVentilation* is dangerous since electrical parts may be live and UV radiation may be present. For these reasons, assembly, installation, maintenance, repair, and disassembly must only be performed by trained electrician and qualified maintenance technicians.



All electrical connections must only be made, disconnected, or modified by trained and qualified staff in accordance with local safety regulations and code.

Safety instructions symbols on the device must be observed.

The UVC *SterilVentilation* must only be opened for cleaning, maintenance, and repair, and any rear panels must only be removed if the UVC unit is completely disconnected from the power supply. The C13 plug must be unplugged from the units C14 power terminal before any work is undertaken on the device.

Electrical work may only be performed by trained and qualified electrician. The power connection and protective ground connection must be in accordance with the circuit diagram.

The disassembly of the UVC *SterilVentilation* unit (other than for replacement of the UVC lamp emitter) or of individual components are not permitted.

The side cover that allows access to the internal electrical components, fan motor and UVC lamp emitter must only be removed with the C13 plug unplugged from the UVC unit.

## Safety

### Continued from 1.2 Safety Notes

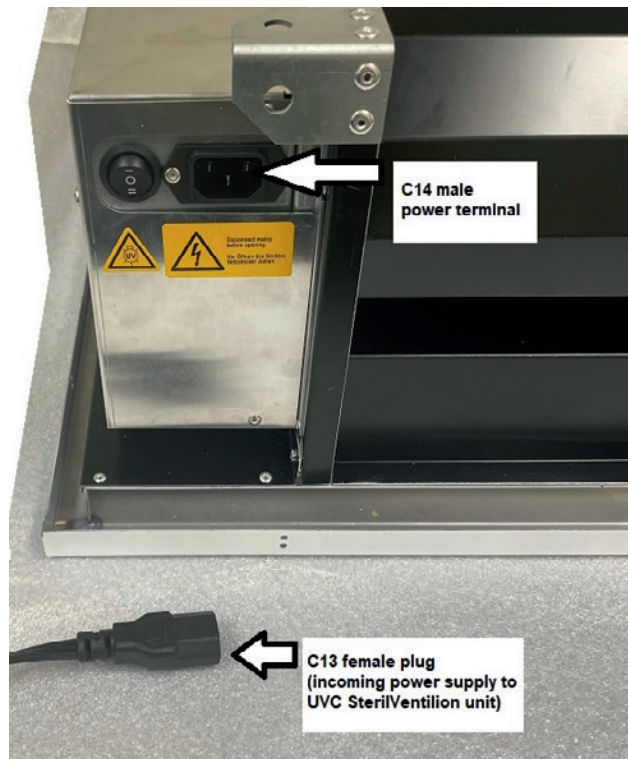


Figure 1 - C14 Terminal and C13 plug & lead (supplied by LTG) identified



The UVC SterilVentilation must only be opened for cleaning, maintenance, and repair, and any rear panels must only be removed if the UVC unit is completely disconnected from the power supply. The C13 plug must be unplugged from the unit's C14 power terminal before any work is undertaken on the device (see Figure 1 above).



The fan motor may heat up to approx. +150 °F in continuous operation. Let the motor cool down if necessary or wear safety gloves before touching the fan or motor after the unit has been in operation..



Take protective measures against falling parts when working overhead. Wear a safety helmet.



Do not allow any foreign objects or dirt to enter the impeller. A damaged impeller or the ejection of any objects may endanger the room occupants as well as causing damage to the UVC unit.



This device should not be supported by the suspended T-Bar ceiling, it must be secured back to the soffit or slab by drop rods and/or equivalent suspension wires. The drop rods and/or suspension wires must not be subjected to additional load other than the UVC unit.

If

- the device has been mechanically damaged,
- the fan shows any damage (imbalance, bearing damage, motor damage), or the fan/motor becomes very noisy,
- the blue LED indicator is not illuminated (see Figure 2),
- the suspension or housing shows clear signs of corrosion,
- the front diffuser face is damaged or missing or light can be seen through it (this does not refer to the LED indicator lamp),

then

- the device must only be operated once it has been thoroughly inspected and repaired by trained staff.

Until the unit has been inspected and repaired, it must be turned off and the C13 plug unplugged from the unit, even if this means that the device cannot be operated temporarily.

A damaged UVC SterilVentilation cannot be used under any circumstances.



If the unit is powered and working correctly, apart from hearing the fan run and feeling air movement, this Blue LED will be illuminated when the UVC emitter lamp is working. It is normal to see this through the slots in the diffuser face.



Figure 2 - Blue LED



If the unit is powered and running but the LED light is not illuminated, switch off the unit and unplug the C13 plug from the unit.

## Delivery/Storage/Transport

### 2. Delivery, Storage, Transport

The UVC *SterilVentilation* always must be transported, stored, installed, and operated in dry and dust-free ambient conditions.



Use protective gloves to avoid cuts when handling the device or its packaging.

The packaging must not be removed until immediately before installation to avoid soiling of or damage to the device.



LTG Aktiengesellschaft and LTG Inc is not liable for any contaminations of or damage to the device.

#### 2.1 Transport Instructions

The device must be handled properly in transport. It must not be thrown, put down suddenly or hit against any other objects or walls.



Avoid collision, sudden putting down, or improper transport of the packed device to avoid damage to the unit.

Make sure that the device is securely fastened during transportation and cannot be damaged by any other objects.

The individual devices should be carried by at least 2 persons when being transported by hand.

The packaging is not weatherproof.

### 2.2 Delivery

Standard devices are usually delivered as follows: Single or multiple units per cardboard box or wooden crate.

Dispose of the packaging material in accordance with local code and regulations.

#### Scope of supply

- 1 Recirculating room air disinfection unit  
UVC *SterilVentilation*
- 1 UVC-UVN 40 4CX1 P 15/465 H0 low pressure lamps (integrated into the device)
- 1 set Diffuser borders (4) with external dimensions to suit T-bar at 24" x 24" centers
- 8 Torx threaded screws M4 8 (used to secure diffusers borders to UVC unit)
- 1 C13 Power connection cable (1 plug to suit C14 power terminal) c/w 6 ft lead in black

The device must be fully protected against weather, moisture, and other influences that could cause damage during storage.

The storage site must meet the following climate conditions:

Temperatures between +40...+130 °F with max. 90 % relative humidity (non-condensing).



## Function/Features

### 3. Function, Features

The UVC SterilVentilation is a recirculating room air disinfection unit that can be retrofitted in any rooms easily. It has been designed specifically for installation in T-Bar ceilings with T-Bar centers of 24" x 24".

The low-noise, 2 speed LTG tangential fan installed in the device continuously recirculates room air from the room through the unit, which is equipped with high performance UV-C low-pressure emitter lamp, verifiably killing, or inactivating 99.99 % of all pathogens.

The UV-C shielded housing ensures safe, low-maintenance, and continuous operation. In contrast to comparable solutions, the tried and tested LTG fan and flow technology provides effective circulation of room air from the units' combined intake and discharge diffuser. This means that the air volume of room can be reliably disinfected once or twice per hour.

- Ozone- and chemical-free – invisible, natural, odorless radiation from powerful UV-C low-pressure lamps (wavelength 254 nm)
- Made in Germany – tried and tested, high-quality air handling and UV-C components
- Low maintenance continuous operation – no need to change and dispose of any contaminated filters
- Easy installation – no specialist knowledge necessary (plug & play)
- Tested UV-C shielding in accordance with both IEC-62471 and DIN EN ISO 15858 ensures safe operation where people are present
- 2-stage operating mode (max or silent), can be chosen based on application during installation via three position switch located on the unit (see Figure 3)
- LED display for optical function monitoring

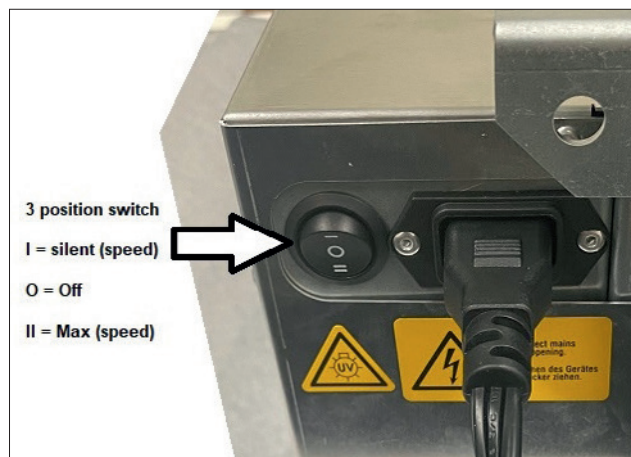


Figure 3 - Three position switch



The C13 plug must be unplugged from the unit's C14 power terminal before any work is undertaken on the device.

It is not sufficient isolation of the power to switch the unit to the 'O' off position when about to undertake any work on the device.

#### 3.1 Intended Function

The UVC SterilVentilation is intended for indoor use. It is approved for ambience conditions of 40 to 105 °F with a maximum rel. humidity of 90 % (no condensing).

For permanently safe function of the motor unit, the ambient temperature in the room and in the ceiling cavity must not exceed a temperature of 105 °F.

The device must be mounted in a T-Bar ceiling or can be freely hung as an exposed unit.

The devices tangential fan draws in room air containing airborne viruses, bacteria, and mold. This room air is channeled via a series of internal turning vanes to pass over a UVC emitter lamp before then being turned back via additional turning vanes towards the diffuser's discharge slots. These slots then discharge the air along the ceiling and back into the room space. As the air passes over the lamp, it inactivates the airborne viruses, bacteria, and mold with a disinfection rate of 99.99% (log 4).

Careful location of the unit can help overcome some issues in rooms where furniture or fittings prevent good circulation of room air in the space, however, dependent on the amount and height of furniture or permanent fittings such as partitions etc., full circulation of the entire room cannot be always achieved.

In a space with good and free air circulation, a room of 500 to 750 SF can have its room air be effectively disinfected with one to two circulations per hour and with a single UVC device.



The device should be installed at least 7' 9" above the floor, it is not suitable for lower height installations.



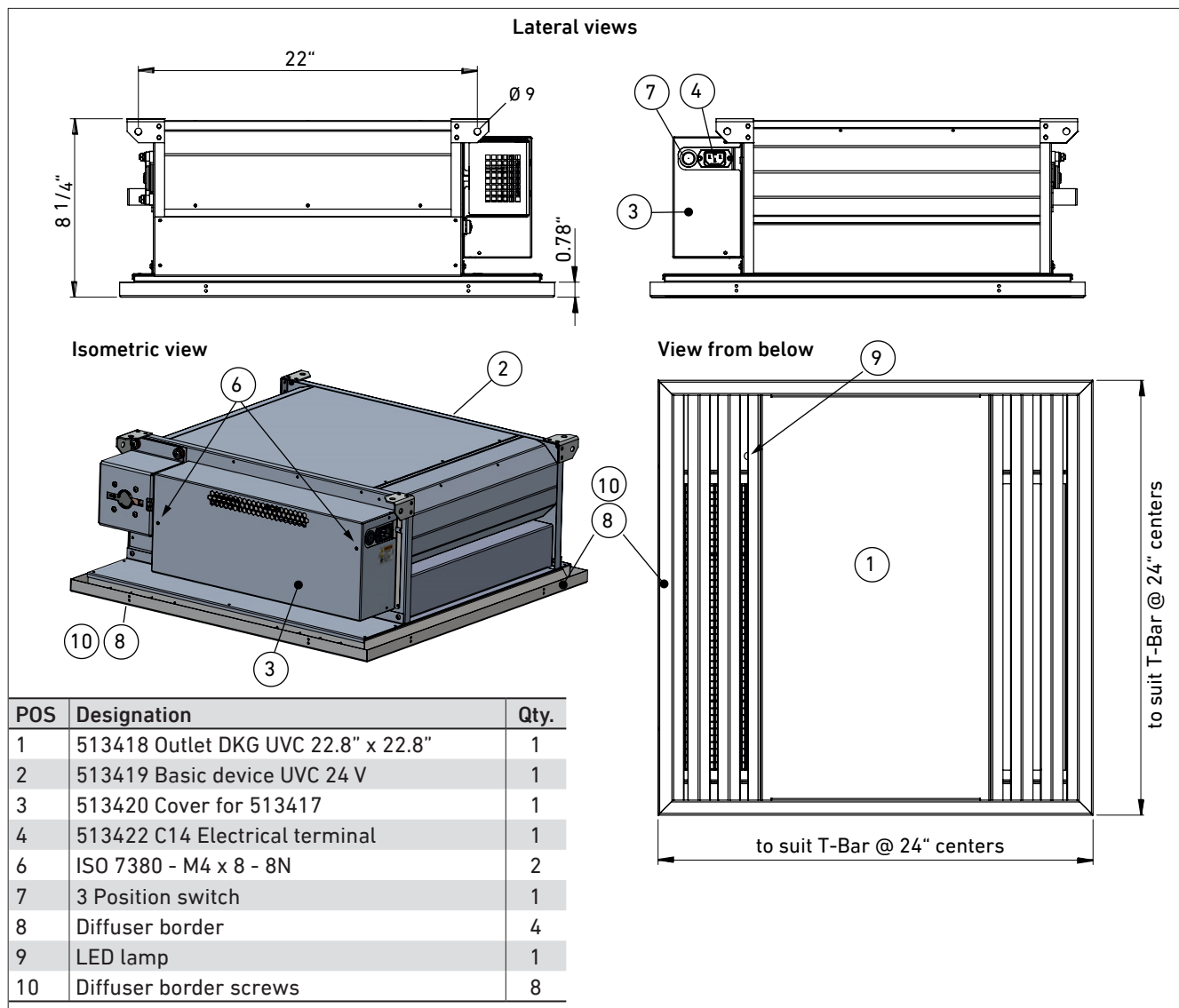
Deviating operating conditions require a written special release from LTG Aktiengesellschaft or LTG Inc.

LTG shall not be liable for any damage resulting from non-intended use of the product.

## Technical Data

### 4. Technical Data

#### 4.1 Dimensions, Device Structure



##### 4.1.1 Diffuser Borders

The UVC *SterilVentilation* main body is a standard size used for different countries. Each unit is supplied with 4 loose borders and 8 screws. The borders are sized to suit T-Bar @ 24" x 24" centers for the USA.

The return outer edge on the UVC body also has two sets of holes (a set being two holes, one above the other – see Figure 4). This is to allow the borders to be either flush mounted with the UVC face or installed high to reproduce the same effect that you get with a tegular edge ceiling tiles.

The borders should be assembled to the unit by the installer with the screws provided prior to the UVC unit being installed into the ceiling.

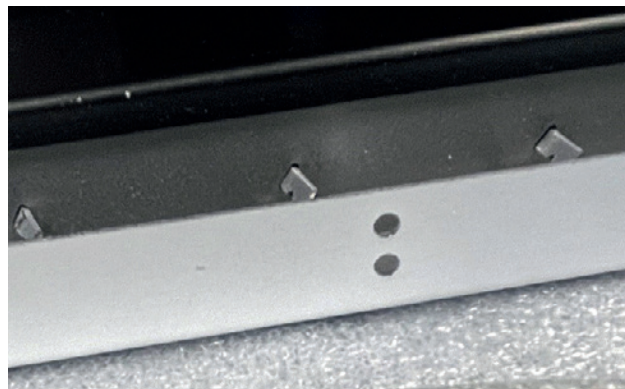


Figure 4 - UVC fixing holes for USA border

## Technical Data, Installation

### 4.2 Technical Data

Length x width x height	
UVC Body (no borders)	22 13/32" x 22 13/32" x 8 1/4"
Overall face c/w borders	23 3/4" x 23 3/4" x 8 1/4"
Flow rate (Boost)	170 cfm (0 to 10 V only)
(Normal)	120 cfm
(Silent)	70 cfm
Sound level Lp *	28 to 45 dB(A)
Electr. power consumption	35 to 70 W
Mains voltage	115 V / 60 Hz
Protection class IP	20
Weight	42 lbs
Lamp service life	up to 16,000 hrs

\* at 8 dB room attenuation

The acoustic data have been determined in a reverberant room in LTG test laboratory.

The values apply to 1 device.

If more than one device is installed in one room, the sound pressure level will increase.

**Level increase with several sound sources of the same kind:**

Number of equivalent sound sources	1	2	3	4
Level increase [dB]		3	5	6

The measuring accuracy is  $\pm 10\%$

## 5. Installation

### 5.1 Installation Instructions

Check the device for visible damage before installation. If in doubt, do not install the unit until it has been fully inspected.

The device is usually delivered as described below:

- UVC device with 4 fixed mounting brackets for suspension from the soffit or slab.
- 4 loose border profiles and 8 screws (to be assembled prior to installation as described in section 4.1.1).
- 1 loose C13 plug with 6 ft cable.

The following items must be observed when installing the devices:



Work on electrical connections must only be performed by trained electricians.

Always turn off the device and unplug the C13 plug before opening or servicing.

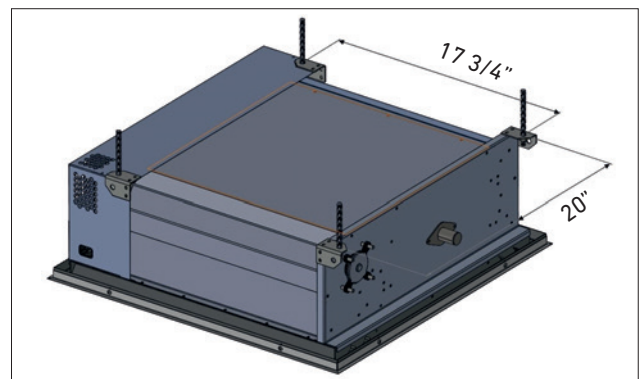
Before removing the side access cover to access the electrical connections or for changing the UV-C low-pressure lamp, unplug the C13 plug otherwise you could become exposed to UV-C radiation, which must be avoided.

The UVC SterilVentilation is mounted directly in the suspended T-Bar ceiling or can be exposed mounted either with or without the additional borders.

Threaded rods with a diameter of 5/16" in the appropriate length can be used for this purpose. The threaded rods are fixed to the soffit or slab at the correct location to match the hanging brackets on the UVC unit. Drop rods of the correct strength needs to support the UVC unit that weighs 42 lbs.



We recommend that a qualified ceiling installer install the UVC unit into an existing ceiling to avoid damage to the T-Bars and also provide additional materials needed should the unit be installed into a ceiling that has T-Bars at 24" x 48" centers.

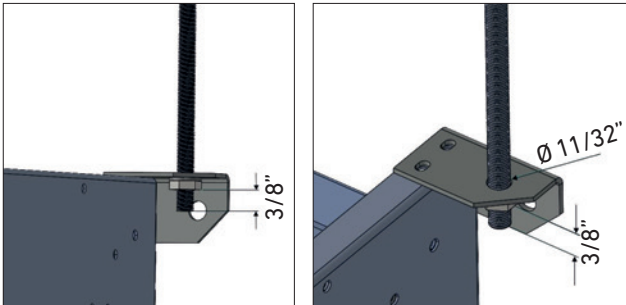


The lower end of the threaded rod is passed through the hole on the hanging bracket and secured with a 5/16" washer and locknut.



## Installation

### Continued from 5.1 Installation Instructions



The distance from the soffit or slab must be sized so that the UVC borders and ceiling T-Bars are flush. The following detail indicates the positioning of the hanging bracket centers (which are not symmetrical).

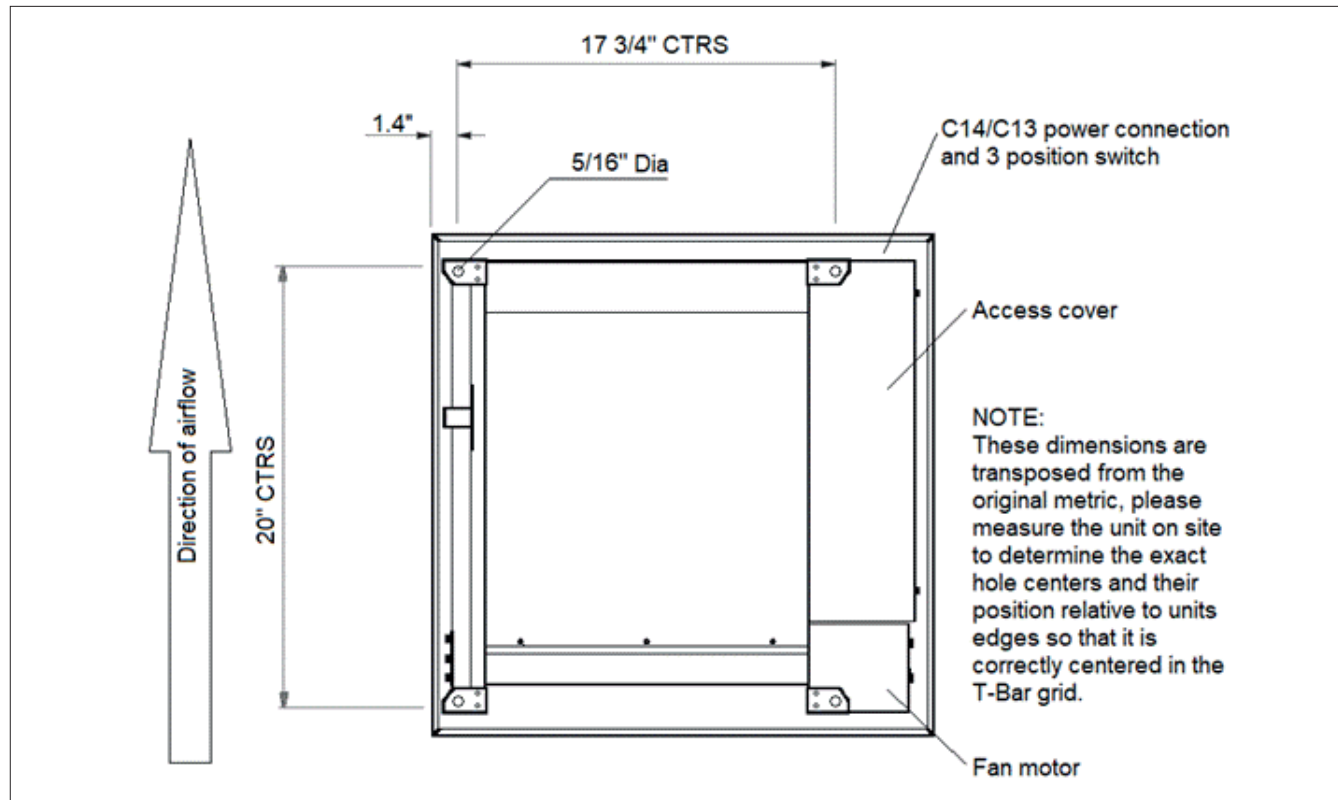


Make sure that the weight of the UVC unit is borne solely by the threaded rods when mounting the device in a T-Bar ceiling.

The UVC unit is to be suspended from the ceiling by their own 5/16" threaded rods. It must not be placed on or in the T-Bar ceiling as it is not designed to support the weight of the UVC unit.



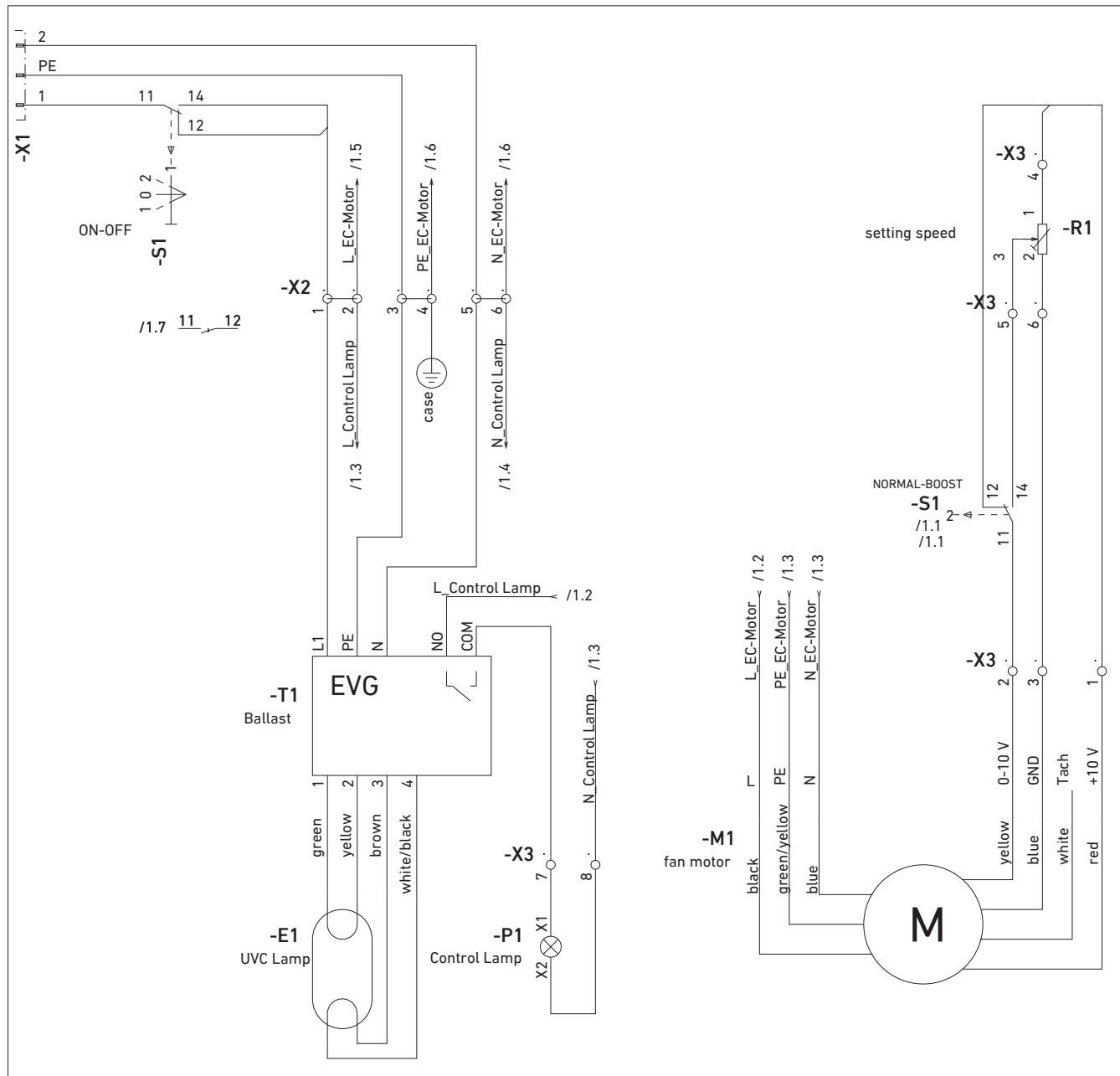
LTG shall not be liable for any damage resulting from incorrect installation or any damage to the existing ceiling system.



Please ensure you have the correct orientation of the unit based on the desired direction of airflow in the room. The unit cannot be simply rotated through 90 or 180 degrees as the fixings are asymmetrical.

## Installation

### 5.2 Electrical Connection



Work on electrical connections must only be performed by trained electricians. Always unplug the device before opening or servicing. When working on the device, always pull the C13 plug. Before removing the side access cover to access the electrical connections or for changing the UV-C low-pressure lamp, unplug the C13 plug otherwise you could become exposed to UV-C radiation, which must be avoided.

## Commissioning

### 6. Commissioning

Check the device for visible damage before commissioning. Ensure that the cover of the electrical connections is firmly attached to the housing.

The C14 power connection socket is placed on the side of the electrical connection cover. Insert the C13 power plug and power cord that provides the 115 V power supply to the unit. If this power supply is a switched connection, make sure it is switched 'off' until you have made the connection and then switch 'On' the power supply.

The UVC SterilVentilation has a three-position rocker switch located to the left of the C14/C13 plug connection. When the switch is in the middle position marked 'O' the unit is switched off locally. The upper switch position as marked 'I' runs the fan at low speed (70 cfm) and the lower switch position marked 'II' runs the fan at max speed (120 cfm). Figure 5 shows the switch in the 'II' position.



Figure 5 -  
Three position  
switch

After selecting the required speed via position "I" or "II" on the switch, there will be a short initial period before the fan starts to run.

There will also be a blue LED indicator that lights up.



The visible "blue" LED contains no dangerous UV radiation. It signals that the unit is operating correctly.

Figure 6 shows the LED from the side.

Figure 7 shows the LED through the face.

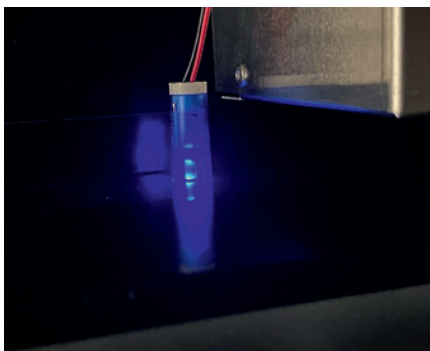


Figure 6 -  
LED from the side



Figure 7 -  
LED through the  
face

The UVC SterilVentilation is designed for continuous operation.

#### 6.1 Adjusting the Fan Speed (Air Flow Rate)

The UVC SterilVentilation has the max speed set in the factory. However, the lower fan speed can be adjusted on site.



The fan speed must only be adjusted when the device is powered down. The safety instructions in chapter 5.2 must be observed.

The work must only be performed by trained electrician.

To change the low fan speed, first remove the two M4 x 8mm screws on the side cover. These are shown on the isometric drawing in section 4.1. and below, see Figure 8.

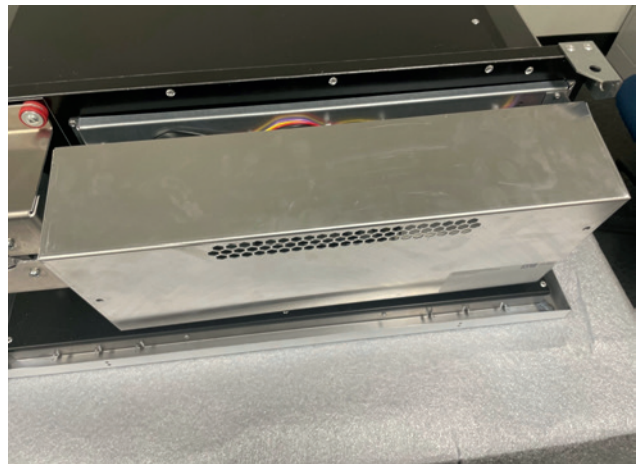
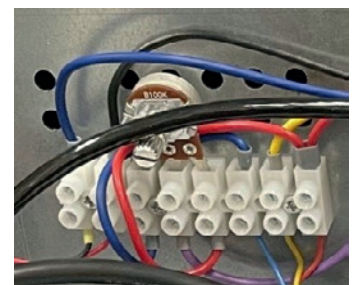


Figure 8 -  
Remove the electrical  
connections cover by  
carefully pulling it out to  
the side and locate the  
potentiometer



## Commissioning, Operation/Maintenance/Service

### Continued from 6.1 Adjusting the Fan Speed (Air Flow Rate)

The Potentiometer sets the low speed when you select the 'I' position on the 3-position switch. By turning this clockwise or counterclockwise, you speed up the fan to the max speed of 120 cfm or down to 50 cfm. The only reason to make an adjustment is if the speed position "II" is noisier than you prefer and the "I" position is not fast enough; you can increase the low speed until you get to an acceptable noise level.

The cover conceals

- the electrical ballast,
- the removal-protection device of the UV-C low-pressure lamp
- the potentiometer
- the unit's wiring and connectors.

The fan motor is to the left of the cover and does not need the cover removed to access it.

Before the device can be put back into operation, the cover of the electrical connections must be firmly screwed back onto the housing. Only then must the C13 power cable be reconnected.

Make sure that the blue LED indicator is lit, and air is flowing out of the outlet.



The visible "blue" LED contains no dangerous UV radiation. It signals that the unit is operating correctly.

## 7. Operation, Maintenance, Servicing

### 7.1 Changing the UV-C Low Pressure Lamp (UVC Lamp)



The lamp can heat up to +125 °F. Wear appropriate protective gloves when replacing the lamp.



If a lamp breaks, glass splinters and mercury will get on the floor or into the air duct of the device. Mercury is poisonous. Ventilate the room by opening all windows. The doors must be closed. Leave the room for several minutes (at least 30 minutes) while ventilating it for safety and only remove the shards after this.

Never use a vacuum cleaner to remove the shards. It would spread the fumes even further throughout the room.

Carefully sweep up the broken lamp with a dustpan or cardboard. Fine, small fragments can be picked up with adhesive tape. Use appropriate protective gloves.

Clean the area with the fragments with a damp cloth. Then place the shards, cardboard, and adhesive tape in a screw-lid glass jar. Label the glass with: "Caution, may contain mercury residue from UVC lamp!" Then hand this glass in at your local waste disposal company or recycling center.

Never dispose of it in the domestic waste.



The integrated UVC lamp must only be replaced when the device is powered down. The safety instructions in chapter 5.2 must be observed.

The work must only be performed by trained electricians! The safety instructions in chapter 1.2 must be observed as well.

A blue LED display in the air intake area of the device indicates that the UVC lamp is functioning properly (see Figure 7). Please check regularly that the blue LED display is always lit when the device is in operation. If the LED indicator does not light up, the UVC lamp installed in the device must be replaced. The UVC lamp may be operated for up to 16,000 hours continuous operation.

To change the UVC Lamp, first remove the two M4 x 8 mm screws on the side cover. These are shown on the isometric drawing in section 4.1. in the photo in section 6.1 (Adjusting the Fan Speed) and Figure 8.



## Operation/Maintenance/Service

### Continued from 7.1 Changing the UV-C Low Pressure Lamp (UVC Lamp)



The C13 plug must be unplugged from the units C14 power terminal before any work is undertaken on the device.

It is not sufficient isolation of the power to switch the unit to the 'O' off position when about to undertake any work on the device.

With the cover removed, identify the location of the lamp UVC lamp removal-protection clamp and screw located on the side of the housing, see Figure 9.

Carefully unscrew the clamp retaining screw, (Figure 10) and store it safely.



Figure 9



Figure 10

Remove the UVC lamp's removal-protection clamp see Figure 11.

Note that the lamp has a 'line' marker on it and that the power connector has a 'Y' shaped marker. These are for alignment when reconnecting the two.

With care, pull off the power plug and ceramic socket connector from the ceramic end of the lamp, see Figure 12. Take care not to put pressure on the lamp or touch the lamp glass and make sure you retain the O-ring. Remove O-ring and store it safe.



Figure 11



Figure 12

Now remove the UVC lamp sideways out of the UVC device making sure you do not touch the lamp glass, see Figure 13. Observe the safety instructions in chapter 1.2.

Dispose of the UVC lamp in accordance with the procedure described in the chapter 10. Carefully guide the new UVC lamp in to the UVC device. Replace the O-ring. Reconnect the ceramic socket, this must snap fully in place and with the two alignment markers, the 'I' and "Y" in line, see Figure 14.



Make sure that this unit is only fitted with an original UVC replacement lamp supplied via LTG. No other lamp should be installed ever.

Replace the removal-protection clamp and locking screw.

The Ceramic socket has two flat sides which need to align with the bracket, therefore you may need to twist the ceramic socket slightly to locate it in the bracket correctly.

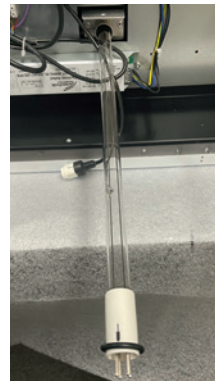


Figure 13

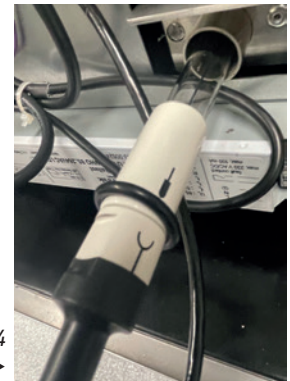


Figure 14

The lamp socket is aligned and the bracket locked in place, see Figure 15.

Remount the cover of the electrical connections (see chapter 6.1) on the housing of the device and reconnect the C13 plug to the C14 connector.

Make sure that the blue LED indicator is lit (it can be seen towards the left of the connection cover and below the fan motor, see Figure 16).

The fan should also be running, and room air should also be recirculating through the unit.



Figure 15

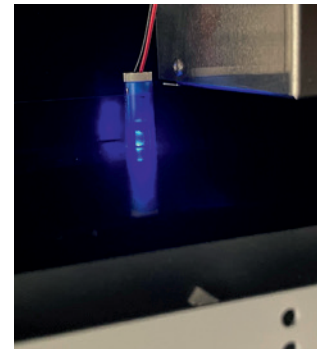


Figure 16



## 7.2 Cleaning

Do not use any abrasive or aggressive or flammable cleaning agents such as bleach or alcohol to clean the diffuser air outlet. Clean the diffuser air outlet with a soft cloth, mild detergent and water.

## 8. Troubleshooting



Disconnect the C13 power plug before resolving any faults.

Fault	Potential cause	Remedy
No blue light visible	Power supply missing	Check the mains voltage Check the supply line
	C13 power plug is not plugged in	Check the plug connections on the power supply cable
	UVC lamp defective	Replace the UVC lamp
No air flows out of the air outlet	Air intake obstructed, Foreign bodies in the air outlet	Check the air intake on the bottom of the device
	Fan defective	Contact the service department of LTG Inc: <a href="mailto:info@ltg-inc.net">info@ltg-inc.net</a>

If there are any other malfunctions, contact the service department of LTG Inc: [service@ltg-inc.net](mailto:service@ltg-inc.net)

## 9. Spare Parts

Spare parts are available as follows:

You should initially contact your local LTG rep who sold the equipment in the first place.

To Contact LTG Inc directly :

By email: [service@ltg-inc.net](mailto:service@ltg-inc.net)

By phone: (+1) 864 599-6340

## 10. Decommissioning, Disposal

Observe the respective legal regulations.

The safety instructions in chapters 1.2 and 7.1 must be observed as well.

If the device is taken out of operation, no longer used, and disposed of as waste:

- All steel parts are waste to be recycled.
- All plastic parts are waste to be recycled.
- All electronic components are waste to be recycled.
- This unit should be safely disposed of as defined by your local codes.
- The UVC lamp must be disposed of separately to the UVC SterilVentilation product, it should be clearly identified as containing Mercury and disposed of as defined by your local code for such materials.

### **Comfort Air Technology**

Air-Water Systems  
Air Diffusers  
Air Distribution

### **Process Air Technology**

Fans  
Filtration Technology  
Humidification Technology

### **Engineering Services**

Laboratory Test & Experiment  
Field Measurement & Optimisation  
Simulation & Expertise  
R&D & Start-up

#### **LTG Aktiengesellschaft**

Grenzstrasse 7  
70435 Stuttgart  
Germany  
Tel.: +49 711 8201-0  
Fax: +49 711 8201-720  
E-Mail: [info@LTG.net](mailto:info@LTG.net)  
[www.LTG.net](http://www.LTG.net)

#### **LTG Incorporated**

105 Corporate Drive, Suite E  
Spartanburg, SC 29303  
USA  
Tel.: +1 864 599-6340  
Fax: +1 864 599-6344  
E-Mail: [info@LTG-INC.net](mailto:info@LTG-INC.net)  
[www.LTG-INC.net](http://www.LTG-INC.net)