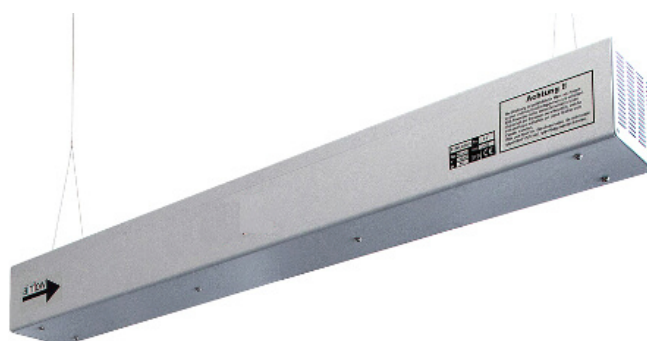




LUDES AIR 270

ASSEMBLY AND OPERATION INSTRUCTIONS



Safety Instructions

- This device is not to be operated by people with reduced physical, sensorial or mental capabilities or lack of experience and / or knowledge (including children).
- This device is a technical tool to be used in closed areas or receptacles.
- Protect your eyes and skin from UV light. In a very short period of time UV-C radiation generates severe sunburn and painful conjunctivitis in the eyes.
- Please take into consideration that the equipment's operator is responsible for all people being inside the room.
- UV radiation can be screened by means of current glass, transparent plastic materials such as macrolon, as well as by practically any other type of non-transparent material.
- As to reduce a possible dazzling effect, the use of tinted protective goggles is being recommended.
- Additional information regarding UV filters may be obtained from the norm "EN 170 – Personal Eye Protection".
- Quartz glass is permeable to UV radiation and must not be used for personal protection.
- Please pay attention to the fact that materials which are not sturdy enough will be damaged by UV-C.
- The unintentional use of the device or a damaged housing may cause the spill of dangerous UV-C radiation.
- Devices showing evident damages must not be operated - please contact the manufacturer in case!
- Before opening the device, present operating and maintenance instructions should be read.

!!! Caution: Areas which can only be opened by using a tool must to be considered as maintenance areas. Unauthorized opening may be dangerous for the operator !!!



Assembly Instructions

general information

- The UV plant **LUDES AIR 270** needs to be installed and operated in a horizontal position.
- The scope of delivery contains the assembly system.
- Assembly should be carried out by authorized qualified staff only. The current electrical instructions (DIN 0100, BGR A3, BGV A3, u.a.) should be considered.

1st step: preparation of the UV system

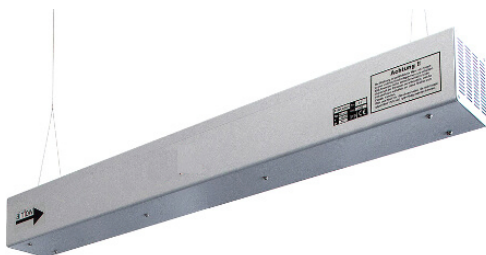
- Close the **LUDES AIR 270** plant.
- Please make sure that the housing cover is fixed at the basic unit at the mounting points using the 6 bolts.

2nd step: assembly of the UV system at the ceiling

Option 1: wire suspension



- fixing of the two wire suspensions at the ceiling
- hitching up the system at the wire suspension at using the prepared openings at the housing cove



Option 2: Mounting rack



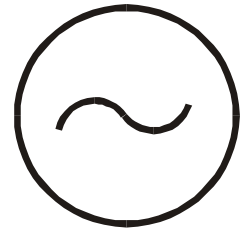
- ensuring that the mounting rack is fixed at the housing cover
- fixing the system at the ceiling using the 4 bolts



Operation Instructions

scope of delivery:

- complete **LUDES AIR 270** housing
- 230 V AC 50Hz power supply for UV ray supply voltage
- 3x UV-C lamp 90 W



intended use:

- This product is intended for air disinfection and:
 - has to be operated with 230 VAC 50Hz power supply
 - has to be used in both humid and dry environments;
 - shall not be exposed to severe mechanical strain or heavy pollution;
 - shall not be altered or modified.

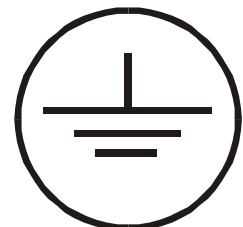
installation and operation:

- The housing should be installed horizontally (see assembly instructions).
- A direct connection of the system to the existing electrical installation is generally possible.
- The front cover (fan guard) may only be used for lamp replacement and then decreased only in the off state of the system (safety rules). An operation of the system without end cover (fan guard) is not allowed!

connecting the UV lamp:

- Introduce the cut-in unit's power plug into the 230V safety power outlet. Thereafter, the UV lamp's functioning has to be visually controlled.
- The green lights next to the main switch should light up after a short time. The three UV lamps and the fan are turned on.

connection type: safety plug
protection class: I



description of failures:

- In case of insufficient disinfection or poor performance, the equipment has to be inspected.

possible causes:

- contamination of the immersion tube system
- green indicator light is off
- lamp aging

measures to be taken:

- cleaning
- main switch
- lamp replacement

- More electrical work is not carried out.
Please contact the manufacturer or distributor !!!

operating time counter – OTC

**** This chapter is only relevant if the OTC configuration has been chosen ****

- The system operates as a time counter. The counting starts if the system is switched on. With every switch on the so called "Startup Procedure" is carried out. To ensure operability the LED's flashes one after another: red, yellow and green 1 second each. Moreover the procedure can be interrupted to realize a reset of the counter.
- The monitoring system is designed as a traffic light. Two thresholds for UV intensity have been saved:
 - As long as the operating time is below 95% of the guaranteed life time the green LED is illuminated.
 - If the operating time exceeds 95% of the guaranteed life time the yellow LED is illuminated (pre alert).
 - If the operating time exceeds the guaranteed life time the red LED is illuminated (main alert).
- Adjustment of the system after replacement of the UV lamps:
 1. The unit is turned on –
please wait until the UV lamp has started and the LED's have been illuminated
 2. press and hold the "Reset" button (approx. 2 seconds)
 3. release the „Reset“ button
 4. red LED is illuminated once – during illumination of the yellow LED the „Reset“ button is to be pressed and hold again (approx. 2 seconds)
 5. release the „Reset“ button
 6. red LED is illuminated once – during illumination of the yellow LED the „Reset“ button is to be pressed and hold again (approx. 2 seconds)
 7. release the „Reset“ button
 8. the "startup" procedure is carried out
 9. the system is adjusted and the green LED is illuminated.

maintenance - lamp replacement:

- In principle, the UV lamps should be replaced after one year or about 10,000 operating hours have elapsed.

remark:

- Under the UV light influence and independently of the lamp age, the radiator socket will turn brownish although its functioning will not be influenced by it.

procedure

Option 1: after removing it from the ceiling (recommended option)	Option 2: directly at the ceiling
<ul style="list-style-type: none"> • disconnect the equipment • pull the power plug • remove the UV system from the ceiling via: <ul style="list-style-type: none"> ... releasing the wire suspension ... or releasing the mounting rack • open the housing via removing the housing cover • now you can pull the immersion tube systems from the clamps • detach cable screwing • pull the polyethylene-made protecting cap backwards • detach the 4-pole plugs from the lamps • remove the lamps from the quartz tubes • when doing so, just touch the socket (caution: could be hot!) • fingerprints on the lamp's tube are to be removed with an alcohol-soaked cloth or the Service KIT <p>Reinstalling the UV lamps:</p> <ul style="list-style-type: none"> • introduce UV lamps through the stainless steel head into the quartz-made cladding tube until the bottom has been reached • push transparent polyethylene-made protecting cap up to the immersion tube's head sealing • fasten lamp's cable by means of cable screwing and implement traction relief • push transparent polyethylene-made protecting cap into the sealing of the immersion tube's head as far as it will go • put the immersion tube systems back into the clamps 	<ul style="list-style-type: none"> • disconnect the equipment • pull the power plug • the lamp replacement is done on the side on which at the note and type of signs of the located • there is the immersion tube head • unlock the 4 screws at the front side • after the front side has been unscrewed, you can the cable gland on the PE protective cap slightly remove, so you can move the cable • now you pull the complete tube system as far out from the system until the tube head is just outside of the profile (about one hand width) is located. • hold the complete system with the other hand <p>A further addition pulling should be avoided !</p> <ul style="list-style-type: none"> • detach cable screwing • pull the polyethylene-made protecting cap backwards • detach the 4-pole plugs from the lamps • remove the lamps from the quartz tubes • when doing so, just touch the socket (caution: could be hot!) • fingerprints on the lamp's tube are to be removed with an alcohol-soaked cloth or the Service KIT

<ul style="list-style-type: none"> • close the system via fixing the housing cover at the basic unit • go ahead with step 1/2 of the assembly instruction 	<p>Reinstalling the UV lamp:</p> <ul style="list-style-type: none"> • introduce UV radiator through the stainless steel head into the quartz-made cladding tube until the bottom has been reached • push transparent polyethylene-made protecting cap up to the immersion tube's head sealing • fasten lamp's cable by means of cable screwing and implement traction relief • push transparent polyethylene-made protecting cap into the sealing of the immersion tube's head as far as it will go • now the complete immersion tube system is pushed back into the profile; hold the complete system with the other hand • the cable is again slightly bent so that the fan guard be screwed easily
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liability and warranty:

- For warranty claims, we shall only be liable under the national legal warranty.
- The general terms and conditions of **C+R Automations- GmbH** are holding.
- We explicitly point out that the warranty does not apply to damage caused by:
 - operating failure in consequence of insufficient following this user information
 - operating with spare parts such as lamps and ballasts which are no original parts.
 - installation of incompliant accessories
 - incorrect operation / installation
 - removing, manipulating or non-insertion of protective devices
 - improper execution of maintenance
 - wear and non-exchanging of wear agents.

summary of materials:

- stainless steel V4A (1.4571)
- AlMg



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