

SINCERUS™ Linear UV Air Purification System

Installation Instructions

READ AND SAVE THESE INSTRUCTIONS

Safety Precautions/Warnings

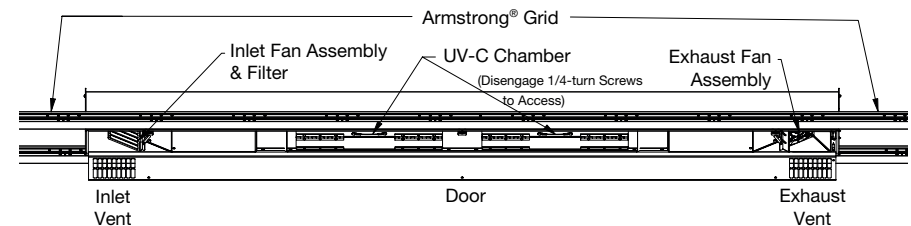
Please read all instructions before using this product. Save these instructions for easy reference. When using electrical appliances, basic precautions should always be followed to reduce breakage, risk of fire, electric shock, and injury to persons.

- To avoid the risk of electric shock, disconnect AC power before installation or maintenance.
- Do not expose to water or excessive moisture.

Installation should be performed by qualified personnel only.

- Consult your local building code for approved wiring and installation.
- Do not use outdoors.
- Do not use equipment for other than intended purpose.
- The use of accessory equipment is not recommended by the manufacturer and may cause an unsafe condition.
- Light from UV-C lamp may cause eye or skin injury including burns that are not immediately detectable. If UV-C light exposure is possible, potentially exposed persons should wear UV-C filtering eye protection, long sleeves and gloves, or similar protective wear to assure no exposure of unprotected skin to UV-C.

NOTE: This device should not be used in buildings that are under construction. Heavy volumes of large particulates like construction dust and debris will clog the filter and impact the effectiveness of the Sincerus™ Linear UV unit. In the event that construction needs to be conducted in an area where Sincerus Linear UV units are already installed, it is recommended that the unit is powered off for the duration of the construction project and new filters are inserted when the Sincerus Linear UV units are ready to be started again.



1. GENERAL

1.1 Included Items:

- 1 – Sincerus™ Linear UV unit
- 2 – UV-C lamps
- 4 – MERV 5 Filters

2. SUSPENDED CEILING INSTALLATION INSTRUCTIONS

2.1 Tools Required

- Wire strippers
- Cordless driver with Phillips screw bit
- Ladder
- Work gloves and safety glasses
- Hanger wires and fasteners to attach to support structure

2.2 Location Selection of Units

Sincerus™ Linear UV units should be positioned so that they are evenly spaced within a room. Care should be taken to position the intake side of the unit away from supply grates of the HVAC system. The unit should pull in air already existing in the room, not the fresh air supplied by the HVAC system. Similarly, position the output side of the Sincerus Linear UV unit away from any return ducts for the HVAC system so that the clean air coming from the Sincerus Linear UV unit is not immediately drawn into the HVAC system and taken out of the room.

The air coming out of the Sincerus Linear UV unit is directed at a 30° angle from the vertical plane in order to promote air circulation throughout the room. Position the units, taking the airflow from the HVAC system into account, to best promote full room circulation.

2.3 Building Power and Hanging Ceiling Requirements

- Universal voltage required; 120VAC – 277VAC, 50/60 Hz
– Required power per unit – 170W
- Requires one constant hot circuit for UV-C power, if continuous UV-C protection is desired
- Domestic models are designed to be installed in a linear suspended ceiling (6" x 8' grid size).
- The unit must be retained by a ceiling system that is capable of supporting the fixture's weight with 2 safety slack wires located catty-corner in the holes provided
- Comply with all local, state, and federal laws

2.4 Installation

Step 1: Run Electric

An electrician will be needed to run power to the appropriate locations.

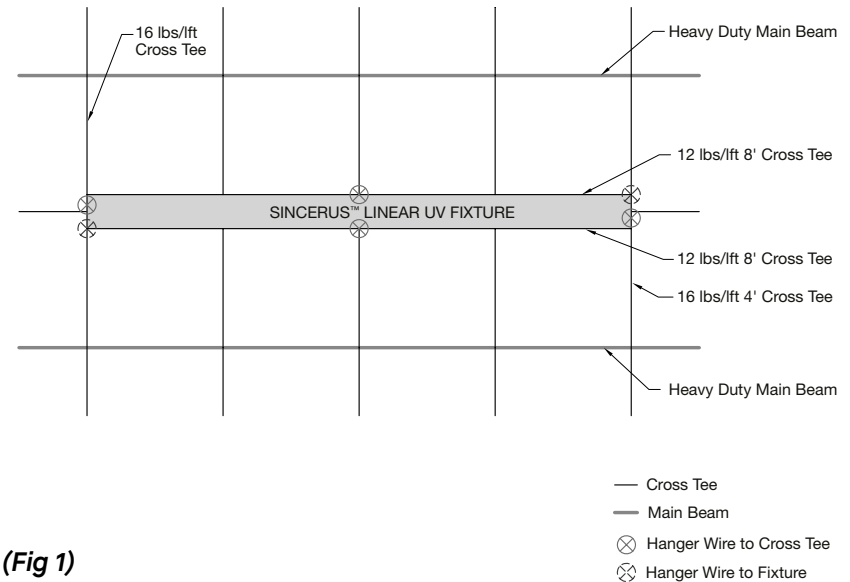
1. The unit will require one circuit.
 - a. A constant hot circuit operating the UV-C lamp.

Step 2: Pre-Hang Unit

- Armstrong recommends utilizing two people to install a single unit as the Sincerus™ Linear UV unit weighs approximately 48 pounds.
- For new ceiling construction, it is advised to pre-hang the unit approximately 3" above the designed ceiling height prior to installing any grid.
- For a pre-existing ceiling, a minimum opening of 2' x 2' and plenum height of 15" is required. Once that is made available, it is advised to pre-hang the unit approximately 3" above the designed ceiling height prior to additional ceiling modifications.
- **NOTE:** Less plenum space is required with larger ceiling openings.

Step 3: Ceiling Installation and Support Wires

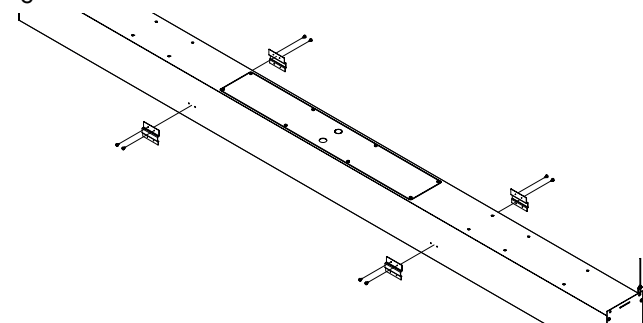
- All ceiling layouts require a hanger wire attached to the supporting grid at each end of the unit, two hanger wire located catty-corner on the unit end caps, and two hanger wires located at the midpoint of the supporting 8' cross tees. Example shown in **(Fig 1)**. All hanger wires must be 12-gauge (not included).
- See Linear Fixture Installation Instructions for additional details.



(Fig 1)

Step 4: Locate/Secure Unit

- Lower the Sincerus Linear UV unit into the 6" x 8' opening in the ceiling grid, ensuring the two catty-corner hanger wires **(Fig 2)** are taut once the unit is in place. Finally, install the four retainer clips with the provided #8 x 1/2" sharp point screws (capturing the grid between the clip and the unit) to fully secure the unit to the grid.

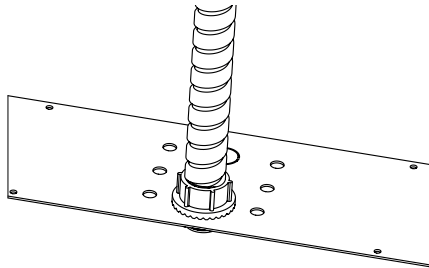


(Fig 2)

Step 5: Electrical Connection

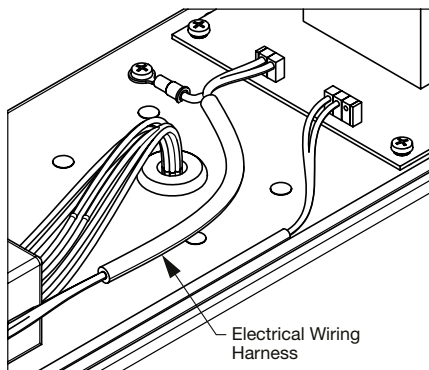
CAUTION: Ensure all power has been turned off to the circuit at the breaker panel.

- All Sincerus™ Linear UV units will require one constant hot circuit for the input power if continuous air purification is desired. If it is not necessary to run the unit 24/7 for a particular location, the power input can be run to a switch.
- Consult local code requirements for approved wiring methods, conduit bodies and/or fittings. At minimum, strain relief should be provided so that the mechanical stress on flexible cable is not transmitted to terminals, splices, or internal wiring.
- First, remove the access plate and determine if the remaining knockout tab should be removed if multiple units will be connected in series. With the proper knockout tabs removed, install the wiring conduit through the access plate, and secure with lock ring. **(Fig 3)**



(Fig 3)

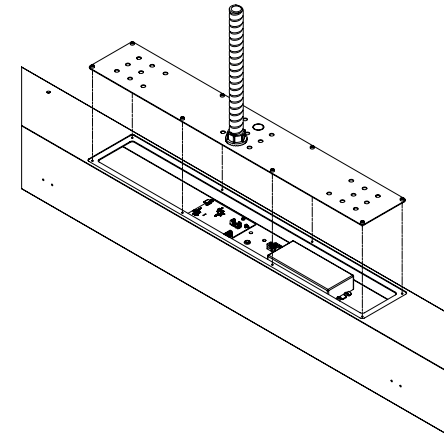
- Connect the ground wires from all power connectors to the fixture's ground wire connector with the green-striped yellow wire before connecting the fixture to any power source. **(Fig 4)**
- **IMPORTANT:** Always connect the black power wire (line) to the fixture's wire connector with the black wire. The white power wire (neutral) should be connected to the fixture's wire connector with the white wire. **(Fig 4)**



(Fig 4)

Step 6: Close electrical housing

- Once the power is connected, all the connectors will need to be placed within the housing.
- The access plate will now be screwed down. **(Fig 5)**



(Fig 5)

Step 7:

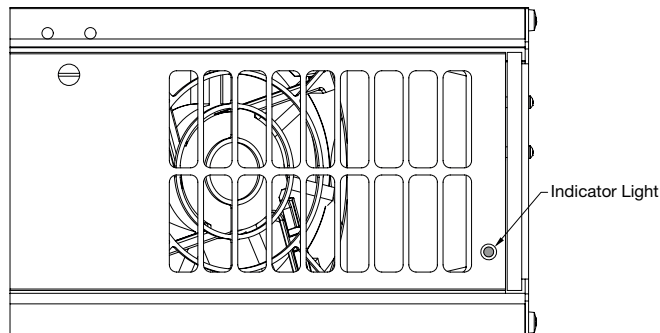
- Once the ceiling panels are installed, the suspended ceiling installation is complete.

3. OPERATING INSTRUCTIONS

If installed as instructed, the Sincerus Linear UV Air Purification System runs autonomously 24/7. The Sincerus Linear UV Air Purification System is an engineering control system that requires minimal quarterly maintenance and treats the air with no human intervention necessary when the UV-C lamp and fans are operating. Follow these steps to keep it operating as intended. The Sincerus Linear UV system must be operated indoors, in a temperature and humidity-controlled environment between 41-104° Fahrenheit and 10-90% humidity. When operating, a green indicator light on the front of the unit will illuminate to indicate the unit is functioning normally. The storage temperature should be between 4-122° Fahrenheit and 10-90% humidity.

Normal Operation

When functioning normally, a green LED indicator on the front of the unit will be illuminated. If the indicator LED turns to red, the UV-C lamps must be replaced. **(Fig 6)**



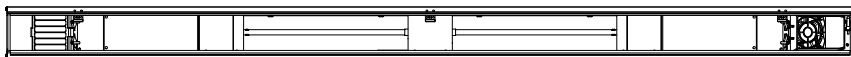
(Fig 6)

UV-C Lamp Maintenance

The Sincerus™ Linear UV Air Purification System is designed to treat the air 24/7. In order to assure that the UV-C lamps in each unit work as expected, we recommend that you change each lamp annually. The intensity of UV-C lamps continuously degrades during use and will start to depreciate to a significant degree after 9,000 hours (375 days) of constant use. If either lamp fails or the intensity of either lamp falls below an acceptable level for pathogen elimination, the indicator light on the front of the unit will turn red. This indicates that both lamps need to be replaced. The UV-C lamps used in this unit are special lamps. Please contact your Armstrong® Sincerus Linear UV distributor or TechLine at 1 877 276-7876 or techline@armstrongceilings.com.

UV-C Lamp Replacement Procedure

Disconnect the Sincerus Linear UV unit from main power. Lower the front door assembly by turning the three quarter-turn flat head door latches counter-clockwise. Be careful to support the weight of the door during this process. The door will swing open approximately 90°. Slowly lower the door to the fully opened position. A safety switch below the outboard fan will deactivate the UV lamps when the door is opened to prevent accidental UV exposure during servicing. **(Fig 7)**



(Fig 7)

The Sincerus Linear UV unit utilizes 2 UV-C lamps housed in two separate chambers. Wearing eye and skin protection appropriate for UV-C light protection, open one of the UV-C chamber doors by rotating the two quarter-turn winged door latch fasteners counter-clockwise. Push up on the door and retract it to its fully opened position. Remove the old UV-C lamp by grasping the lamp by the white plastic end (opposite of the end that plugs into the unit) and pull the UV-C lamp end from the clip. Then carefully pull the UV-C lamp out from the socket. To install the new lamp, carefully plug the UV-C lamp into the socket and push the white plastic end into the clip. Close the UV-C chamber door and secure the two door latch fasteners. Repeat the steps for the other chamber. Once complete, close the front door assembly. Reconnect to main power and verify the indicator LED is illuminated green.

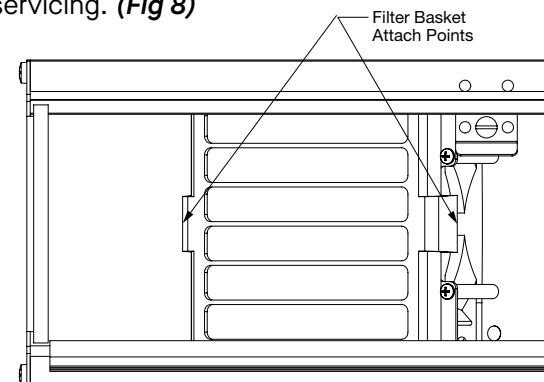
MERV 5 Filter Maintenance

We recommend changing the prefilter every 3 months or every 2,200 hours of use. Dust and debris gather on the filter as the fans draw air into the system so keeping the filter clean is critical to the operation of the unit. The filter used in this unit is a special filter designed for the Sincerus Linear UV Air Purification System. The Sincerus Linear UV unit comes with one filter installed and three replacement filters to last the first year of use.

Please contact your Armstrong Sincerus Linear UV distributor or TechLine at 1 877 276-7876 or techline@armstrongceilings.com for replacement parts.

Filter Replacement Procedure

Lower the front door assembly by turning the three quarter-turn flat head door latches counter-clockwise. Be careful to support the weight of the door during this process. The door will swing open approximately 90 degrees. Slowly lower the door to the fully opened position. A safety switch below the outboard fan will deactivate the fans when the door is opened to prevent contact with an operating fan during servicing. **(Fig 8)**

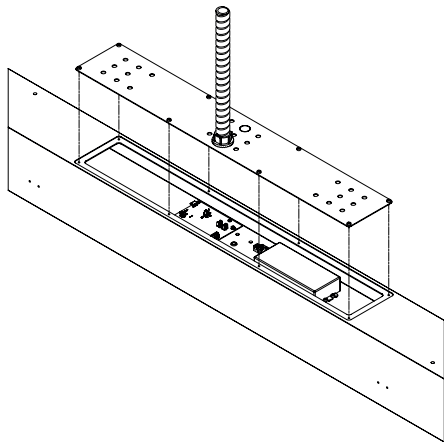


(Fig 8)

Locate the filter cage on the inboard side of the unit. (Fig 8) Remove the filter by gently pulling on the lower locking tab until it disengages from the fan guard plate. Once the filter cage is removed, remove the filter from the filter cage cavity and discard the filter. Place the new filter in the filter cage cavity, then reinstall the filter cage by reengaging both the upper and lower locking tabs onto the fan guard plate. Close the front door assembly. Please contact your Armstrong® Sincerus™ Linear UV distributor or TechLine at 1 877 276-7876 or techline@armstrongceilings.com for replacement parts.

Fuse Replacement Procedure

Disconnect the Sincerus Linear UV unit from main power. Remove the electrical panel access plate (Fig 9).



(Fig 9)

Locate fuse holder on printed circuit board. Remove the fuse from its holder and replace with Littelfuse, Fuse Glass 1A 250VAC 5×20mm, Part No. 0618001.MXP, or equivalent. After fuse has been replaced, return wires and connectors inside the housing, and reattach the access plate.

Cleaning Procedure

Occasional cleaning of the unit may be necessary. Clean only the exposed painted surfaces using mild soap and water mixture. Apply this mixture to a clean cloth and wipe down the painted surfaces. Never spray the cleaning fluid directly onto the vents or the UV-C Lamps, but instead spray onto clean cloth and then wipe the exposed painted surfaces.

Do not use harsh cleaners, solvents, or detergents. To do so could result in equipment damage.

Do not expose the unit to excessive moisture. To do so could result in personal injury and/or property damage.

Managing Spent UV-C Lamps

In 1999, the US Environmental Protection Agency (EPA) added a provision for mercury-containing lamps to the Universal Waste Rule (UWR, 40 CFR Part 273). The UWR was developed to encourage recycling and proper disposal of these wastes, which meet the Federal criteria for hazardous waste but are widely generated and typically do not pose an immediate and undue risk. Here is a list of lamp recyclers you can contact for services near you: <http://www.lamprecycle.org/commercial-lighting-lamp-recyclers>

Troubleshooting

1. If the indicator light is red, there is a possible issue with the UV-C lamp and/or UV-C ballast.
 - Lower the front door assembly by turning the three quarter-turn flat head door latches counter-clockwise and slowly lowering the door assembly. A safety switch below the outboard fan will deactivate the UV lamps when the door is opened to prevent accidental UV exposure during servicing.
 - The Sincerus Linear UV unit utilizes two UV-C lamps housed in two separate chambers. Wearing eye and skin protection appropriate for UV-C light protection, open one of the UV chamber doors by rotating the two quarter-turn winged door latch fasteners counter-clockwise. Push up on the door and retract it to its fully opened position.
 - Inspect UV-C lamp and socket, and replace items if necessary. Do this in both UV chambers. After a “known good” (new) lamp is installed, the indicator LED should turn from red to green.
2. If no light is seen at the indicator LED
 - Verify the outer door is fully closed and secured
 - Verify there is incoming power to the UV-C input connector
 - Replace UV-C ballast if necessary
3. If either fan stops spinning
 - Verify the indicator LED is illuminated
 - Verify the fan is securely plugged into its mating connector
4. For additional troubleshooting assistance, please contact TechLine at 1 877 276-7876 or techline@armstrongceilings.com

Consumable Replacements

To order replacement UV-C lamps, MERV 5 filters, ballasts, and other components, contact us by phone at TechLine at 1 877 276-7876 or techline@armstrongceilings.com. Replacement Fuses supplied by others; Littelfuse, Fuse Glass 1A 250VAC 5×20mm, Part No. 0618001.MXP, or equivalent.

Warranty:

Manufacturer offers a 3-year limited warranty on the Sincerus™ Linear UV Air Purification System.

- Manufacturer warrants Sincerus Linear UV unit to be free from defects in materials and workmanship for the specified period beginning on the date of purchase (or date of manufacture when purchase date is in question)
- Warranted for a full year – UV-C lamp and fans
- Warranted for 3 years – fixture construction, including ballasts, photo cell, and failure indicator lamp

This warranty does not cover:

- Damages to products for reasons beyond manufacturer's control, including, but not limited to: power surge, water infiltration, abuse, misuse, accidental damage, vandalism, fire, natural disaster, and lightning
- Incompatibility with products not supplied by manufacturer, or other issues not related to materials and manufacture
- Installations not in accordance with the latest National Electrical Code, Underwriters Laboratory Bulletins, and ANSI Specifications, or these instructions
- Labor costs associated with removing, repackaging for shipment, or reinstalling product

See warranty accompanying your unit for full details. If you need to submit a claim for a warranty, contact us by phone at TechLine at 1 877 276-7876 or techline@armstrongceilings.com.

MORE INFORMATION

For more information, or for an Armstrong Ceilings representative, call 1 877 276-7876.

For complete technical information, detail drawings, CAD design assistance, installation information, and many other technical services, call TechLine customer support at 1 877 276-7876 or FAX 1 800 572-TECH.

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