







IL COIL CLEAN & ITS VARIOUS MODELS UV COIL CLEANER Commercial Model



IMPORTANT SAFETY INSTRUCTIONS READ AND SAVE THESE SAFETY INSTRUCTIONS BEFORE USING THIS PRODUCT.



Photos illustrating products are non contractual.

Read and follow all instructions contained in the manual before using the product. Read the maintenance instructions before opening the UV unit or system. Failure to comply with these instructions may result in injuries or damage to the UV unit or system.

\triangle NEVER EXPOSE EYES OR SKIN TO AN OPERATING UV LAMP. \triangle

- Installation and servicing of UV units or systems (in an air conditioning system or not) can be hazardous. Only trained and qualified service personnel should install, repair or service equipment.
- Untrained personnel can perform basic maintenance functions such as replacing lamp(s) and/or filter(s). All other operations should be performed by trained service personnel.
- The unit is not to be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge.
 - ⚠ CAUTION: Unit is not a toy. Keep away from unsupervised children. Do not leave children unattended with the unit.
- 4. DO NOT hang onto the UV unit or system.
- Some UV units or systems could be heavy: Make sure you have a minimum of 2 people to safely move or install these UV units or systems, and make sure you adopt the most ergonomic position possible (use UV unit or system handles, if applicable).
- When installing or servicing an overhead UV unit or system, be careful not to fall off the stepladder. Furthermore, make sure the UV unit or system latches are always in place to prevent falling parts.
 - ⚠ CAUTION: Some parts of some UV units and systems may open suddenly if the UV unit or system is installed high up without its locks.
- Units that are obviously damaged must not be operated.

- CAUTION: When working on the UV unit or system, observe precautions on the literature, tags and labels attached to the UV unit or system, and all other safety precautions considered as best practices in the HVAC industry, if applicable.
- When applicable, local regulation may comprise more restrictive installation and/or certification requirements. The aforementioned requirements prevail on those of this document and the installer agree to conform to these at his own expense.
- 10. Follow all the safety instructions outlined in this document and respect all local and national codes applicable.
- 11. All UV units or systems contain a UV-C source. Damage to the housing or unintended use of the UV unit or system may result in harmful UV-C leaks. UV-C may, even in little doses, cause harm to the eyes and skin.
- 12. Never expose eyes or skin to an operating UV lamp. Therefore, before installing or performing maintenance on the UV unit or system, TURN OFF AND DISCONNECT the UV unit or system from all power sources (there may be more than one switch to disconnect) and also disconnect the HVAC system, is applicable.
 - ⚠ CAUTION: Electrical shock may cause injuries or possibly death. FIRST AID INSTRUCTIONS: If injured, consult a doctor.
- UV rays may damage certain types of filters (polymer or plastic); please keep the UV unit or system light away from shining directly on plastic.

- 14. When installing or performing maintenance on the UV unit or system, it is recommended to wear safety gloves. In order to avoid reduced performance of lamp(s), do not touch lamp glass without gloves.
- 15. Just like conventional fluorescent lamps, UV lamps contain a small quantity of mercury: if a lamp breaks, clean and dispose of with care. UV lamps can be disposed/recycled after use in the same way as any other fluorescent lamps. Contact and follow the specific instructions of your local and national authorities.
- 16. Use only specified SANUVOX branded replacement UV lamps for your UV unit or system. Use of any other lamps will void your warranty and can result in damage to the UV unit or system.
- Sanuvox UV units or systems are not waterproof. DO NOT INSTALL OUTDOORS OR IN WET LOCATION unless specified otherwise.
- 18. The use of a UV unit or system is a supplement to and not a substitute for standard infection control practices; users must continue to follow all current infection control practices, including those related to the cleaning and disinfection of environmental surfaces.

SAVE THESE INSTRUCTIONS

For any inquiries on a UV unit or system, contact:
Robert Smith
146 Barr St, Saint-Laurent
Quebec, CA, H4T 1Y4
1-888-726-8869
techsupport@sanuvox.com

Installation Date:	Installed by:
Installer Contact Info.:	

c PS us

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ABOUT THE PRODUCT

Congratulations on the purchase and installation of your new Sanuvox ultraviolet unit. Sanuvox UV coil cleaners are the most advanced surface disinfection systems available having been proven to help reduce up to 99.99% of biological and chemical contaminants present on surfaces. Sanuvox systems have been tested by medical universities and Independent 3rd party laboratories.

The Sanuvox IL Coil Clean unit is designed to disinfect the metal fins of industrial evaporator coils. While the IL Coil Clean unit assembly named IL Food Safe, is designed to disinfect the surfaces of food products. MULTI-IL Coil Clean stands out more in the disinfection of cooling systems and the reduction of ethylene in the air.

Sanuvox commercial products such as IL Coil Clean and its various models are specialized products: a sizing calculation must be prepared with your Sanuvox representative for your specific installation.

For information or recommendations on how to size your specific application, please call SANUVOX at 1-888-726-8869.

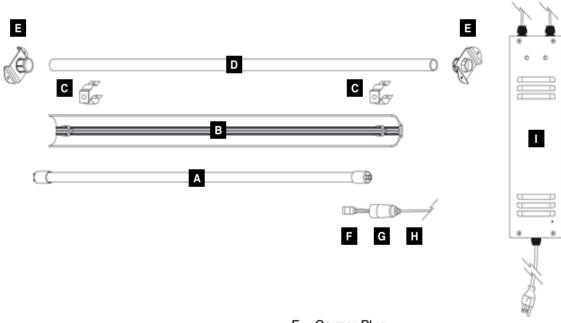
COMPONENTS

How it Works

The IL Coil Clean is an industrial evaporator coil cleaner that is installed in front of the coil of the air treatment systems. Its UV light continuously disinfects the coil metal fins, thus not only maintaining the HVAC performance, but also to obtain healthier air thanks to clean coils.

The IL Food Safe is in fact a combination of several IL Coil Clean, assembled in a metal box (created by the customer himself) and positioned above a conveyor belt where food products circulate. Their UV light disinfect the product surfaces.

The MULTI-IL Coil Clean is an IL Coil Clean with several sections each with different UV intensity. This is a special order product.



- A. UV Lamp
- B. Anodized Aluminum Parabolic Reflector
- C. Clamp Assemblies (2)
- D. 3/4" Support Rod
- E. Mounting Flanges (2)

- F. Gaynor Plug
- G. Lamp Boot
- H. Teflon Wire Set (20 feet)
- I. Ballast Box

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ACCESSORIES & KITS

The following optional accessories and/or kits work great with your product (sold separately).

Interlok Switch MSCSWC14



The interlok switch will shut down the IL Coil Clean operation should the access door be opened.

For instruction manuals or information about your optional accessories and/or kits, please call SANUVOX at 1-888-726-8869 or visit www.sanuvox.com.

SETUP & INSTALLATION

What you will need

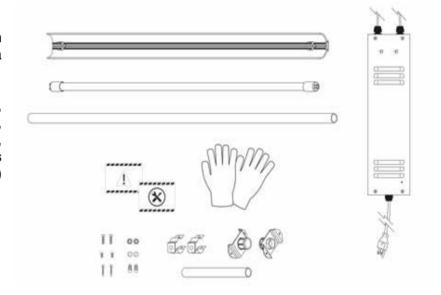
A knife to unpack all the components, a drill with 1/8 and 1/2 bits, an iron saw, a Phillips #2 screwdriver, a nutdriver key with 11/32 and 1/4 sockets.

⚠ CAUTION: Handle your product with care to avoid breaking parts. Make sure you have a free and safe space to unpack, install and setup your product. Confirm you have access to the necessary power source for the product requirements (see unit or system label). If you have any questions regarding the installation instructions, call SANUVOX at 1-888-726-8869.

What's included

The IL Coil Clean (or MULTI-IL Coil Clean) aluminum extrusion, a packaged UV lamp, a support rod, a ballast box, and a basic installation kit.

The installation kit includes: a UV caution decal, a maintenance decal, cotton gloves, hex bolts (2), Phillips head screws (2), self-tapping screws (2), nuts (2), lock washers (2), electrical connectors (2), clamp assemblies (2), mounting flanges (2) and a coupler.



Setup

While selecting the appropriate location for your IL unit(s), refer to your customized sizing and placement proposal. If you do not have the customized proposal, call SANUVOX at 1-888-726-8869 to obtain one at no-charge.

IL Coil Clean units can be installed on the upstream or downstream side of an evaporator coil. The lamp assembly must be field-installed inside the air handling unit (AHU), either horizontally to the side panels, or on the coil frame using the mounting flanges, or vertically to the floor and ceiling of the AHU.

The ballast boxes are to be installed on the outside of the air central in a dry area. If humidifier is present, the ideal location for the coil cleaner is in the air stream before the humidifier.

⚠ CAUTION: Make sure the site can be supplied with the necessary power requirements. Ensure that there is adequate clearance for service and maintenance.

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Step by Step Installation

NOTE: The following instructions mainly focus on the IL Coil Clean, but the assembly instructions for installation also apply for other models such as the IL Food Safe (assembly of several IL Coil Clean units) and the MULTI-IL Coil Clean (IL Coil Clean unit with a multi-section lamp).





1. Turn OFF all power to HVAC equipment and remove IL Coil Clean from its packaging.



2. Locate the propre place where the installation will take place and measure the distance from one partition to the other: subtract 1.5" to take into account the two mounting flanges.

NOTE: Support rods can be installed **horizontally or vertically**. If installed vertically, more rods and flanges are needed.



3. **Measure and cut the rod to desired length** or assemble several rods using couplers, if necessary.

NOTE: For lengths over 66" or when using multiples IL Coil Clean units, multiple support rods may be joined together by using a coupler (included). Refer to "**Using the Coupler to Join Multiple 3/4" Support Rods**" on page 8.



4. Place the mounting flanges on both ends of the support rod and insert this assembly into the HVAC unit at the desired height and depth.



NOTE: When installing a single IL Coil Clean, the lamp must be positioned in the middle of the coil at a distance of 12 to 18" from it.



Once the assembly (rod and flanges) is positioned, secure the flanges to the walls of the HVAC unit using self-tapping screws. Be sure to level the assembly.

NOTE: If it is not possible to attach the flanges directly to the walls of the HVAC unit or its frame, you will have to either use custom supports or make a vectical installation.

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Attach the clamps to the back of the aluminum reflector using Phillips screws and blocking washers. The parabolic reflector holes are predrilled and pre-threaded.





Slide the two parabolic reflector clamps over the support rod to position them. Insert the bolts and nuts and tighten everything with a socket wrench.



8. Rremove the UV Lamp from its packaging. Then, while wearing the included cotton gloves, carefully "clip" the UV lamp using the metal spring clips into the parabolic reflector.



NOTE: For ease of use, the end of the lamp with four pins should face the direction of the ballast box.



The IL Coil Clean assembly must be installed with the UV lamp facing the coil. Rotate the assembly into position and then tighten the setting screws on each of the mounting flanges.

Recommendations: To ensure you protect users from direct UV exposure, **use a interlok switch on the access door.** The switch will stop the operation of the IL Coil Clean when the door is opened.



10. **Installation of the ballast box:** Remove the Phillips screws (4) from the ballast box cover. Set aside the bag containing the Gaynor plug and lamp boot. Mount the ballast box outside the air handler, on a wall or other hard surface. Screw it through the 2 holes in the center of the ballast box.

NOTE: Depending on the configuration and the number of IL Coil Clean, there may be one or two ballasts integrated in a single ballast box. Consequently, you can have one or two 20' teflon cables per ballast.

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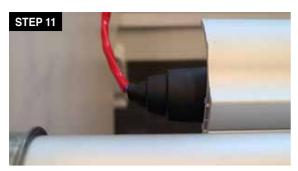
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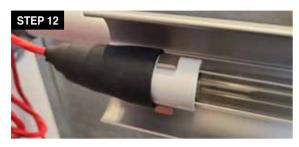
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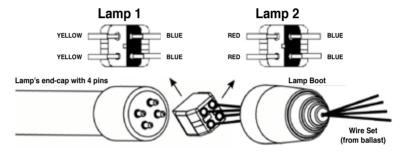
11. Drill a hole in the bulkhead leading to the IL Coil Clean and insert the red wire that powers the lamp. Cut the wire to the desired length (leaving enough slack) and strip the wire from its Teflon sheaths: you should have two wires each stripped on 3/8" of their length.



12. Insert the lamp boot onto the wire and push it about 6" from the end.

13. Take the Gaynor plug and insert each of the unsheathed wires DIAGONALLY. Push hard to make sure the internal mechanism has seized the copper wire.

CONNECTIONS TO GAYNOR PLUG Orientation of Gaynor plug is critical



14. Carefully attach the Gaynor plug to the end of the UV lamp and push the lamp boot over the plug onto the ceramic.

NOTE: The Gaynor plug fits on two out of four ways. If the plug does not fit, just rotate the plug 1/4 turn left or right. The lamp boot is designed to seal the connection between the Gaynor plug and the UV lamp as to reduce the possibility of moisture penetrating to the connection. The lamp boot does not cover the entire end-cap of the UV lamp, but only approximately 3/4".



15. There remains only the **connection of the power supply** which **must be carried out by a certified electrician:** With the ballast box cover removed, install a connector on the round knockout on the bottom of the ballast box. Next, pull an appropriate power cable into the box. Insert the white (neutral) wire and the black (live) wire into the yellow quick connect module.

NOTE: The IL Coil Clean is equipped with a multi-voltage ballast that accepts single-phase voltage from 100 to 240 VAC. This type of ballast allows an AC voltage variation of +/-10%. If at start-up, you measure a variation greater than 10%, you will need to install an AC current STABILIZER (Voltage transformer).

You are now ready to enjo superior indoor air quality.

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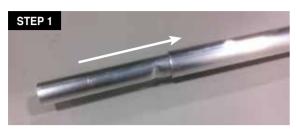




Using the Coupler to Join Multiple 3/4" Support Rods

In the event that the AHU side panels (that supports the IL Coil Clean assembly) are wider than the included 3/4" support rod or that the installation required multiple IL Coil Clean units, the coupler can be inserted between two or more 3/4" support rods of 3/4" EMT conduit, allowing the support rods to be extended to desired length.

Step by Step Coupler Installation



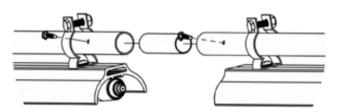
1. Insert half of the coupler inside a first support rod.



2. Using a 1/4" hex head self-drilling screw, drill through the support rod and secure the coupler in place.



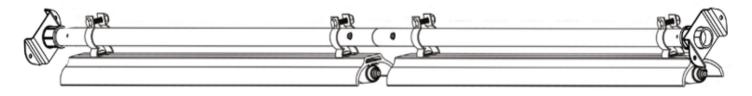
3. Insert the other half of the coupler into a second support pipe and secure it again with a self-drilling screw.





4. The assembly is completed with the coupler tube inside, thus joining two support rods.

You can now install IL units with longer support rods.



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OPERATION

How to Operate your Product

The IL Coil Clean and its various models incorporate unique features into their ballast boxes. These include LED status display as well as tow pairs of dry contacts designed to communicate with building automation systems.

⚠ **CAUTION:** The suggested operating temperature range is 10 to 46°C (50 to 115°F). Operating the IL Coil Clean and its various models outside this range will result in decreased performance.

How to Read the LED Status Display

Depending on the configuration and number of IL units ordered, there may be one or two ballast incorporated into the ballast box. If there is only one ballast, you will notice only one wire set in the ballast box as well as a black cap covering the second LED emplacement. If there is two (2) ballasts, there will be two wire set and two LED.

GREEN: UV UNIT ON

The unit is functioning normally.

YELLOW: UV LAMP NEEDS REPLACEMENT

Notifies the user that the UV lamp has reached the end of its lifespan and must be replaced.

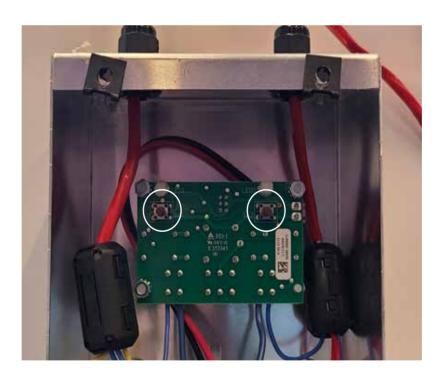
FLASHING RED: UV LAMP FAILURE

Lamp has failed or the unit is powered ON without any UV lamp installed.

LED OFF: NO POWER

There is no power delivered to the unit or power supply is defective.

A reset button is located under the LED (when the cover is removed) allowing the user to reset the lamp timer back to zero after the lamp replacement.



Dry Contacts for Building Automation Integration

Each IL Coil Clean and its various models includes a pair of dry contacts (NO and NC). Dry contacts make it possible for the IL units to be easily tied to a building automation system.

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MAINTENANCE

How to Replace Lamp(s)

Lamps need periodic replacement to maintain design specifications: replace lamps after 2 years of operation. Replacing lamp on the IL Coil Clean and its different models is quick and easy. Simply turn off the power source, remove and dispose of old lamp(s), replace with new Sanuvox branded UV lamp(s), turn power source back on. See below for detailed step by step instructions.

△ CAUTION: In order to avoid reduced performance of lamp(s), do not touch lamp glass without gloves.

Step by Step Lamp Replacement



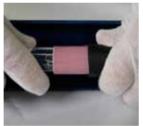
1. Disconnect all power before performing any maintenance or service. With the power off, remove the lamp from the reflector and unplug it.



2. Release the old lamp from the reflector brackets and remove it.

 \triangle **CAUTION:** Use caution when removing and inserting UV lamps from the metal spring clamps.





3. Use a new UV lamp. Plug in the new lamp and place the rubber tip over the tip of the lamp.

NOTE: Always wear cotton gloves when changing the lamp. Also, for ease of operation, the lamp end with four pins should be pointing in the direction of the ballast box.





4. Gently press the lamp into the reflector brackets. Power can now be restored to the IL Coil Clean.



5. Then press on the reset button for resetting lamp timer to zero.

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How to Clean your Product

For optimal performance, the lamp(s) should be kept free of dust and residue deposit. Clean when necessary with mild soap or alcohol. To clean the unit exterior, use a damp cloth with general purpose detergent. Always spot test the cleaner to make sure it does not damage the surface.

△ CAUTION: Under no circumstance should water be sprayed or splashed onto the product.

STORAGE

The IL Coil Clean and its various models does not require specific storage. It is a permanent unit that works continuously when powered.

ULTRAVIOLETS: UVC

The UVC (254 nm) wavelengths produced by Sanuvox UV units and systems are the same as the ultraviolets produced by the Sun. The UVC attacks the micro-organisms on a molecular level deactivating the contaminants. Unlike conventional UV lamps on the market, Sanuvox UV units and systems use a patented process designed to deliver the maximum UV dosage to the moving airstream or surface.

△ CAUTION: Never expose eyes or skin to an operating UV lamp.

ELECTRICAL RATINGS, POWER CONSUMPTION & AVAILABLE VOLTAGE

The IL Coil Clean and its various models has a power consumption that varies according to its lamp length: 1.0 amps for 40" lamps, 1.25 amps for 50" lamps and 1.5 amps for 60" lamps.

See product label to confirm power consumption of your specific unit or system.

NOTE: IF YOU EXPERIENCE A PROBLEM, PLEASE CONTACT CUSTOMER SERVICE FIRST OR SEE YOUR WARRANTY. DO NOT RETURN THE PRODUCT TO THE ORIGINAL PLACE OF PURCHASE. DO NOT ATTEMPT TO OPEN THE PRODUCT OR TAMPER WITH ITS COMPONENTS WITHOUT CONTACTING CUSTOMER SERVICE FIRST. DOING SO MAY VOID YOUR WARRANTY AND CAUSE PERSONAL INJURY OR DAMAGE TO THE PRODUCT.

TROUBLESHOOTING

If your product is not working properly, refer to the following.

What you will need

A Phillips No. 2 screwdriver, a non-magnetic 5/16" nutdriver and spare parts.

Problem	Possible Cause	Solution
LED on ballast box is YELLOW.	- The UV lamp needs replacement.	- Replace UV lamp.
LED on ballast box is FLASHING RED.	 The UV lamp has failed or the unit is powered ON without any UV lamp installed. 	 Make sure there is a UV lamp installed in the unit. Replace UV lamp.
LED on ballast box is OFF.	 There is no power delivered to the unit or power supply is defective. 	Make sure there is power to the unit.Replace power supply.

Contact your contractor for all your needs in terms of replacement parts: UV lamps, Anodized Aluminum Parabolic Reflector, Clamp Assembly, Lamp Boots, etc.

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WARRANTY

You should first read all instructions before attempting to use this product. For this warranty to be valid, keep a copy of the proof of purchase.

UV lamp	2 years	
Ballast	15 years	
Electronic Components	1 year	



A. This limited warranty applies to repair or replacement of product found to be defective in material or workmanship. This warranty does not apply to damage resulting from abusive, unreasonable use or supplemental damage. Defects that are the result of normal wear and tear will not be considered manufacturing defects under this warranty.

SANUVOX IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.

Some jurisdictions **do not** allow the exclusion or limitation of incidential or consequential damages or limitation on how long an implied warranty last, so the above limitations or exclusions may not apply to you. This warranty gives specific legal rights, and you also may have other rights which vary from jurisdiction. This warranty applies only to the original purchaser of this product from the original date of purchase.

- B. At its option, SANUVOX will repair or replace this product if it is found to be defective in material or workmanship.
- C. This warranty does not cover damage resulting from any unauthorized attempts to repair or from any use not in accordance with the instruction manual.
- D. This warranty does not cover the filters, pre-filters or other accessories (if included), except for material or workmanship defects.

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Please be sure to specify product name.

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CUSTOMER SERVICE

TO ORDER REPLACEMENT PARTS

PLEASE CONTACT YOUR CONTRACTOR OR SANUVOX CUSTOMER SERVICE

Toll-Free Phone #: 1-888-726-8869

Email: <u>info@sanuvox.com</u>
Website: <u>www.sanuvox.com</u>

Please be sure to specify product name.

Replacement parts for this product

BST120/277SHS	Ballast with input of 120/277VAC, 50/60Hz
LMPHGS120	12" UV straight lamp, germicidal only
LMPHGS180	18" UV straight lamp, germicidal only
LMPHGS240	24" UV straight lamp, germicidal only
LMPHGS300	30" UV straight lamp, germicidal only
LMPHGS400	40" UV straight lamp, germicidal only
LMPHGS500	50" UV straight lamp, germicidal only
LMPHGS600	60" UV straight lamp, germicidal only
FLGFIXTUBE	Flange
MSCCON19	3/4 EMT connector

⚠ WARNING: Use only specified SANUVOX branded replacement UV lamps with your unit or system. Use of any other lamps will void your warranty and can result in damage to the unit, system and/or lamp(s).

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