

Ultravation®

Professional Indoor Air Quality Products

Complete Whole House Air Cleaning System Photronic Base Media Air Cleaner OWNERS GUIDE



Air Handler Base

Models: 92-052, 92-053, 92-054 (small) 24VAC- 92-055, 92-056, 92-057

Models: 92-046, 92-047, 92-048 (large) 24VAC- 92-049, 92-050, 92-051

Furnace Base

Models: 92-058, 92-059, 92-060 (small) 24VAC- 92-061, 92-062, 92-063

Models: 92-064, 92-065, 92-066 (large) 24VAC- 92-067, 92-068, 92-069

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LEAVE FOR HOMEOWNER

Shipping and Packaging List:

- Filter Housing including Access Doors
- MERV-11 Media Air Filter
- PCO Filter
- 1 Door w/ handles
- 2 Lamps gaskets
- 2- 17" UVC lamps
- 4- 1 inch UVC lamp mounting screws
- 6- 3/4 inch 5/16 self tapping sheet metal screws
- *2- UVC Lamps remote Part:
 12" UVC lamp option
 OR
 17" UVC lamp option
- *4- 1 inch UVC lamp mounting screws
- *8- 1/2 inch 5/16 self tapping screws
- *2- UVC Lamp Mounting Plates
- **50VA 24v secondary transformer

* Included when remote UVC option is purchased

** Included when 24v unit is purchased

Introduction and Applications:

This Ultraviolet Photronic Air Handler Base Air Cleaner is a complete whole house air cleaning system. This high efficiency air filtration unit is designed to remove dirt, dust, pollen, microscopic particles, reduce unpleasant odors, VOC gases and the microbial population from the air that circulates through it. By adding this device to your HVAC system, you are helping to create a cleaner indoor living environment for your whole household.

The system works in 1-3 steps.

STEP 1: Trapping particles in the pleats of the MERV 11 media filter. With an extra large surface area, the filter allows for maximum dirt holding capacity and a long, useful filter life with minimum air flow restriction.

STEP 2: VOC's and gases such as the fumes from new carpets, paints, nail polish, cigar and cigarette smoke are drastically reduced photo chemically via a patented process known as photo catalytic conversion or photo catalytic oxidation.

STEP 3: Germicidal UVC light is applied to the Air and problematic HVAC components to drastically reduce unwanted Virus, Bacteria and Mold.

This air cleaner is to be installed in a forced air heating, cooling and ventilation system. It should be installed so that all the system's air is circulated through the filter first and VOC Section second. The air cleaner will only filter the air that is circulated through it. For maximum filtration effect, set your blower to operate continuously.

Safety Precautions:

It is recommended that this unit be installed and maintained by a trained technician:

WARNING: UV Hazard. Always protect eyes from ultraviolet light. NEVER look at UV lamps in operation. Unplug or disconnect power before re-lamping or servicing.

WARNING: Severe eye damage or temporary blinding may occur.

WARNING: DO NOT operate outside of Air Handler. Mount lamp base to unit first.

WARNING: No openings in duct are allowed which would give direct line-of-sight to the UV light.

In the event of accidental breakage or replacement of the ultraviolet lamp, please ensure that the lamp is disposed of in accordance with local and state environmental laws regarding fluorescent lamps containing mercury.

Notice:

All wiring inside of the duct or air handling system in direct line of site of the UV lamp must be shielded with aluminum foil tape or equivalent non-combustible material. When installing this unit, select a mounting location that prevents ultraviolet light exposure to plastic flexible duct liner or other plastic components with unknown resistance to ultraviolet light. Ultraviolet light may cause color shift or structural degradation of plastic HVAC components

Power Consumption UV-C lamps

<u>Lamp Type</u>	<u>Quantity Required</u>
17-inch UVC lamp are 22 watts each	2
With Remote UVC	
12-inch UVC lamp are 12 watts each	2
OR	
17-inch UVC lamp are 22 watts each	2



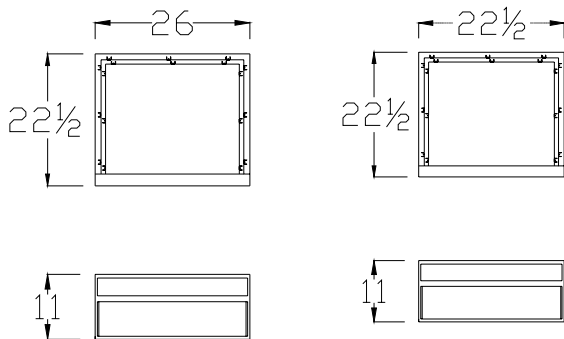
Installation Requirements

This unit is designed to power up constantly and should not cycle on and off with a blower motor.

The desired location for installation of the Ultravation Base Unit Media Air Cleaner is in the return air under the blower compartment. In this location, the blower motor and internal components will be kept clean.

Once the Ultravation Base Unit Media Air Cleaner is installed, it is very important to maintain the unit by changing the filter periodically (typically in 6 mo intervals) so as not obstruct airflow, damage components or increase energy costs.

The Ultravation Base Unit Media Air Cleaner has been designed for use in conjunction with virtually any air handler system.



Do not install this unit in the supply duct.

Be sure to plan adequate space for filter and lamp replacement.

Before installation is complete, seal all joints and seams with duct tape or caulking.

Notice:

All wiring inside of the duct or air handling system in direct line of site of the UV lamp must be shielded with aluminum foil or equivalent non-combustible material. When installing this unit, select a mounting location that prevents ultraviolet light exposure to plastic flexible duct liner or other plastic components with unknown resistance to ultraviolet light. Ultraviolet light may cause color shift or structural degradation of plastic HVAC components.

Installation steps (fixed UVC):

1. The fixed UV-C lamps are located on the front of the UV-C drawer on Base Unit.

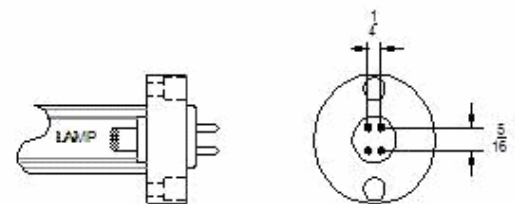
2. Install the lamps into the two open holes on the front of the drawer. Line up the screw holes on white ceramic base of the lamp to those on the drawer. Tighten screws so that the gasket is sealed.

Note: The T3 UV lamp assembly can be removed independently, simply by removing the 2 screws in the white lamp holder.

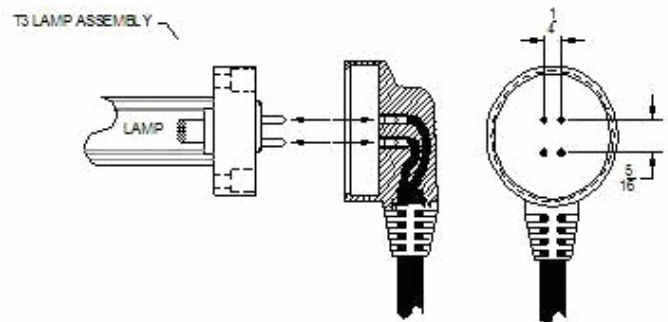
3. Plug the rubber lamp connector fully onto the installed UV lamp assembly. Be sure the 4 pinholes are orientated properly to the 4 mating pins of the lamp.

Note: the pins are in a rectangular patent and can only be mated in 2 positions. Pulling the lamp boot back will help with the visual alignment of the pins and connections. After making the connection be sure to push lamp boot over lamp base.

See the illustration of the T3 lamp 4-pin connector.



TYPICAL T3 LAMP 4 PIN CELL BASE



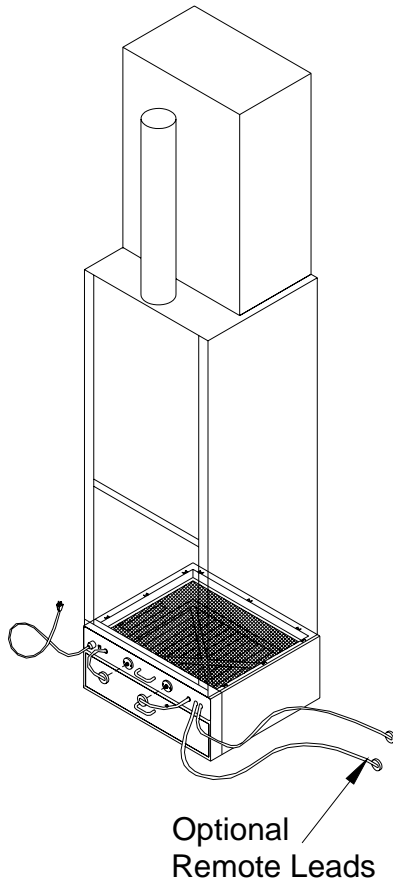
TYPICAL T3 LAMP 4 PIN CONNECTOR BASE

UV-C Germicidal Lamp, Stage 3, Installation steps for Models with UVC option.

UV-C Germicidal Stage 3 is internal or additionally designed for installation in the HVAC (heating, ventilation, and air conditioning) system.

The optimum installation location for UV-C Germicidal Stage 3 lamp is in the supply side ductwork exiting the HVAC system before the ductwork branches.

The UV unit should already be installed in the previous step; the UVC lamps should be centrally located within the air handler and positioned to achieve maximum reduction of airborne pathogens.



Note:

This Photronic System and the UV-C lamps are designed to operate constantly and should not cycle on and off with a blower motor. Installation in a return air duct is acceptable but not recommended in a high dust environment.

It is recommended a trained technician install this unit. Never look at the UV lights without proper eye protection.

Installation steps (remote UVC):

1. Determine a suitable location to install the UV-C Lamps.
2. Select a location for the remote UV lamp module assembly. Drill a 1" diameter hole for each lamp assembly. Attach lamp module assembly with 2 screws at the chosen location, or an optional lamp mounting plate, which has been supplied to mount the lamp assembly.

Note: The T3 UV lamp assembly can be removed independently, simply by removing the 2 screws in the lamp base.

3. Plug the rubber lamp connector fully onto the installed UV lamp assembly. Be sure the 4 pinholes are orientated properly to the 4 mating pins of the lamp.

Note: the pins are in a rectangular patent and can only be mated in 2 positions. Pulling the lamp boot back will help with the visual alignment of the pins and connections. After making the connection be sure to push lamp boot over lamp base.

See the illustration of the T3 lamp 4-pin connector on page 3.

Maintenance:

The filter media in your air cleaner must be changed periodically. The frequency of filter replacement is best determined by visual examination. However, a bi-annual replacement of the 5" filter is strongly recommended. Replacement filters obtained through your installing contractor or local dealer. - Actual replacement may vary depending on the severity of dust and dirt particles.

If the Photocatalytic aluminum filter should become dirty, it may be cleaned with low velocity compressed air or vacuum only, no solvents or water should be used. If the Photocatalytic section becomes wet, allow the section to air dry before reinstallation.

The aluminum mesh screen on the Photocatalytic filter is coated using a patented process known to photochemically breakdown VOC's and Odors as well as reduce airborne pathogens on contact. Under normal operating conditions this filter should not require replacement within five years and may last up to 10 years.

The Air cleaner should never be run with a filter with less than a MERV-11* Filter.

Using less than a MERV-11* Filter rating will reduce the effectiveness of this product. It is recommended that this product be serviced and maintained by an HVAC professional.

*MERV or Minimum efficiency rating value is a number assigned to filters indicating their ability to capture particles and dust, the higher the number the better the filter. A MERV 11 filter is 40% more effective than a MERV-8. Be sure that an Ultravation MERV-11 filter is requested for replacements in this product.

Lamp Status View port

When the unit is on, if light is detectable through the view port than the lamps are working.



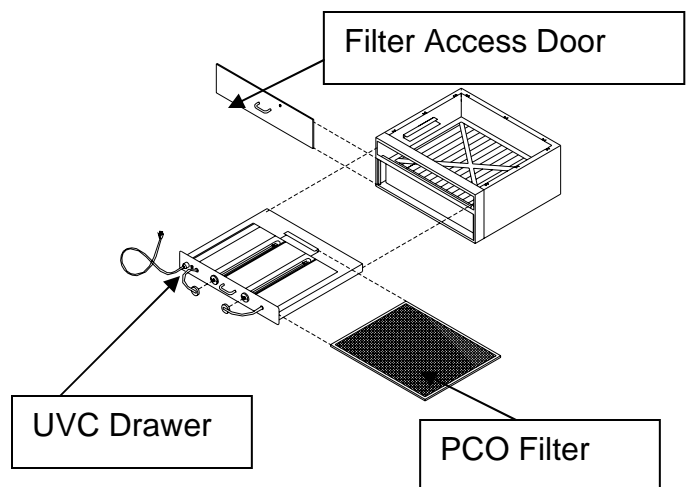
Steps for replacing filters:

Pleated Media Filter:

1. Open the access door by lifting up on the handle and pulling the bottom of the door toward you. Then slide the top of door down, removing the door completely.
2. Remove pleated filter and discard.
3. Slide new filter into cabinet with "airflow label pointing in the direction of the airflow. Be sure to seat new filter into top and bottom brackets to assure a good seal.
4. Replace access door.

Aluminum PCO Filter:

1. Remove the top drawer with UVC lamps in it by unscrewing the 6 hex head screws.
2. Remove aluminum filter and discard.
3. Slide new filter into the drawer. Be sure to seat new filter into the rear bracket to assure a good seal.
4. Replace drawer and then screws.



Warranty:

Ultravation warrants this product against any defects in material or workmanship for a period of 10 years after date of purchase, with the exception of the disposable media filter, the UV Lamps, the battery, the ductwork and installation. The UV lamps are warranted for a period of 1 year.

This warranty does not include damage to the unit from accident, misuse or improper installation. If this product should become defective during the warranty period, Ultravation will elect to repair or replace the product free of charge. Ultravation will return repaired or replaced warranted products pre-paid, provided that the product was delivered pre-paid.

Ultravation shall have no responsibilities for charges incurred by the customer for installation or removal of warranted items. Liability is limited only to the replacement or repair of this product.

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state. All returns must be accompanied by a return authorization number, which may be obtained by contacting Ultravation, Inc.

Ultravation, Inc. ~ P.O. Box 234 ~ 218 Jones Drive ~ Brandon, Vermont 05733
Phone: 802-247-0034 ~ Fax: 802-247-0033 ~ www.ultravation.com

Replacement Parts:

16" x 25" x 5" MERV 11 Filter p/n: **91-005**

20" x 25" x 5" MERV 11 Filter p/n: **91-006**

20" x 20" x 5" MERV 11 Filter p/n: **91-013**

(See Serial Number Label on inside of equipment door for unit replacement part numbers)

20" x 25" x 1/2" PCO Filter p/n: **91-030**

16" x 25" x 1/2" PCO Filter p/n: **91-031**

20" x 20" x 1/2" PCO Filter p/n: **91-032**

17" UV-C Lamps p/n: **AS-IH-1003**

12" UV-C Lamps (if equipped) p/n: **AS-IH-1001**