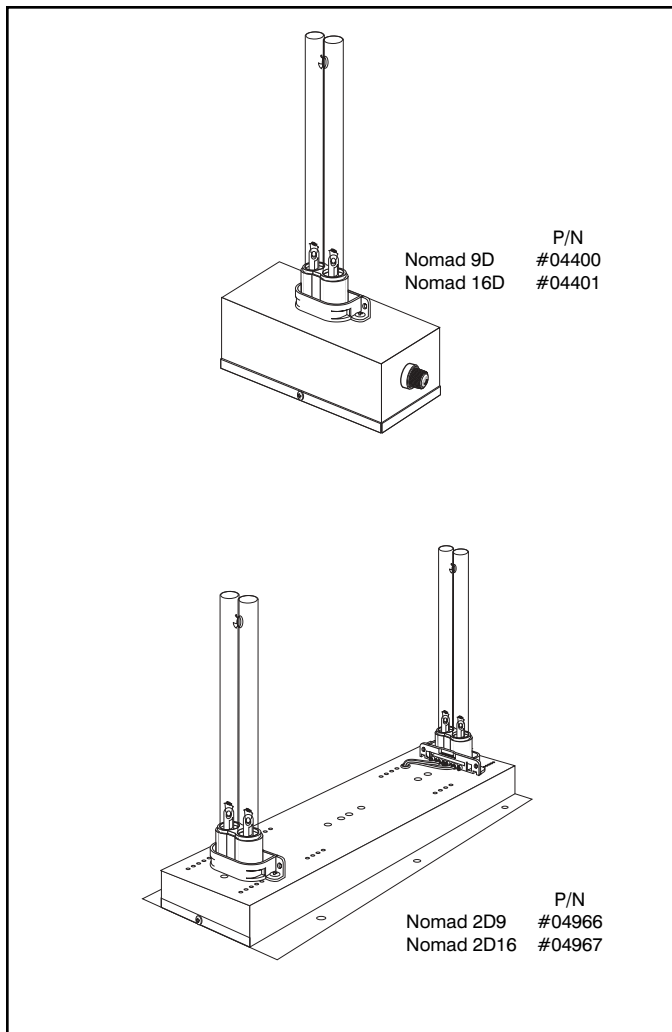


BIO-FIGHTER®

Nomad & Nomad 2 Ultraviolet Light Systems

Installation & Operation Manual



FEATURES

- Reduces or prevents mold growth on HVAC coils, allowing them to operate at peak efficiency. Also destroys bacteria, viruses, fungi, and yeasts.
- High output, long life UV-C lamps.
- Low maintenance and reduced costs.
- Multi-voltage electronic ballast.

INCLUDED INSIDE BOX

- Germicidal ultraviolet light system
- UV lamp(s)
- Mounting brackets (2) (Nomad only)
- 3/8" mounting screws (4) (Nomad only)
- 1" mounting screws (4) (Nomad only)
- 1.5" mounting screws (4) (Nomad 2 only)
- Mounting spacers (4) (Nomad 2 only)
- Installation & operation manual
- UV-C warning label for duct

TOOLS REQUIRED FOR INSTALLATION

- Electric drill
- Phillips screw bit or screwdriver
- 1/2" drill bit
- 3" Holecutter (Insert-mount installation only)
- Eye protection

BEFORE INSTALLING

- Read all instructions carefully. Failure to do so could damage the equipment or cause harm to yourself or others.
- Acknowledge all warnings.
- Only qualified technicians should perform the installation.

GENERAL

This product is designed to help disinfect the internal surfaces of heating, ventilation, and air conditioning systems. Bacteria and viruses that are in the air stream that passes through the system will also be reduced. The result is an improved level of indoor air quality for occupants and improved system hygiene.

The Bio-Fighter® emits ultraviolet (UV-C) radiation at a frequency of 254 nanometers, which has been proven effective in damaging the DNA of microorganisms such as viruses, bacteria, yeast and molds. This process either destroys the microorganism or neutralizes its ability to reproduce.



PO Box 519
Royse City, TX 75189
PH: 1-972-635-9564
[Http://www.dustfree.com](http://www.dustfree.com)

SPECIFICATIONS

Base Dimensions

MODEL	DIM. A	DIM. B	DIM. C	DIM. D
Nomad 9D	3.125"	7"	3.5"	9"
Nomad 16D	3.125"	7"	3.5"	16"
Nomad 2D9	1.5"	17"	5.93"	9"
Nomad 2D16	1.5"	17"	5.93"	16"

Weight:

Nomad 9D - 2 1/4 lbs.

Nomad 16D - 3 3/4 lbs.

Nomad 2D9 - 5 1/3 lbs.

Nomad 2D16 - 7 5/8 lbs.

Electrical:

120V, 60Hz, 1PH. 3 amp-250v fuse.

Optional 230V, 60Hz, 1PH.

Operating Environment:

45° F - 150° F (Outside of duct.)

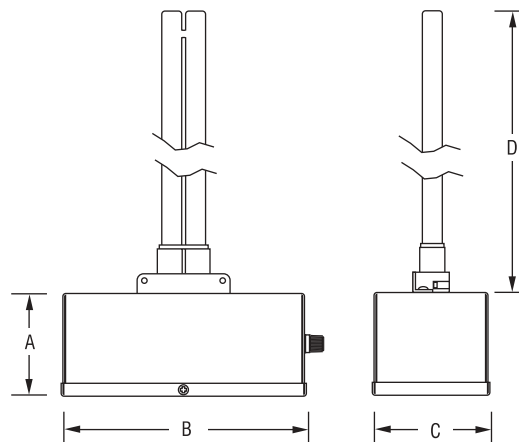
Listings:

FIFRA - File #73316

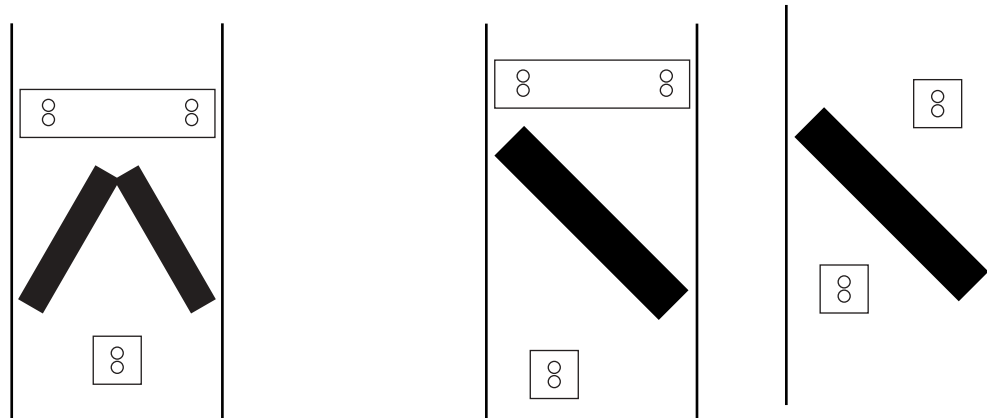
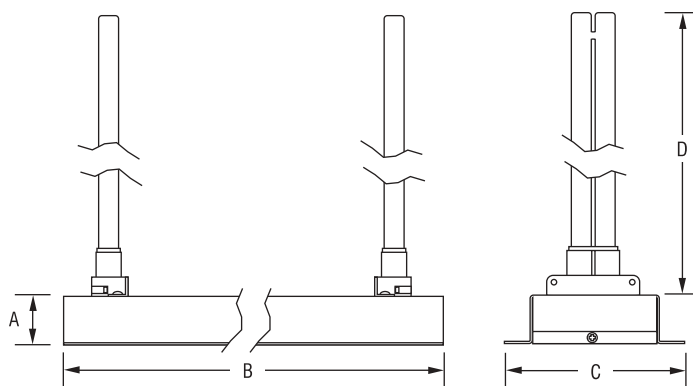
(Federal Insecticide Fungicide Rodenticide Act)

Specifications subject to change without notice.

NOMAD



NOMAD 2

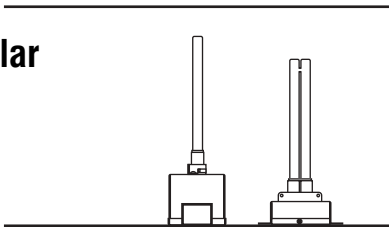


Nomad Mounting Options (Fig.4)

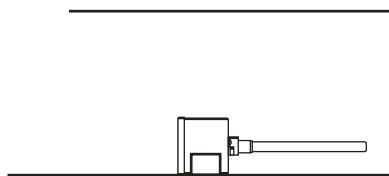
The Nomad may be installed as a parallel mount, perpendicular mount, or as an insert mount depending on your requirements. The included brackets and screws allow the device to be mounted in any of these orientations.

Note: For insert-mount applications a 3" hole must be cut into the duct to allow for the insertion of the lamp and connector.

Perpendicular Mount



Parallel Mount



Insert Mount

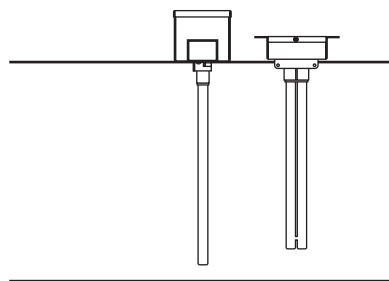


Fig. 4 Nomad may be mounted in any one of three orientations.

Attach Mounting Brackets (Fig.4)

Attach brackets to the side of the Nomad chassis with the 3/8" mounting screws. Choose the set of bracket holes appropriate for your installation. Be sure bracket is flush then install the Nomad inside the HVAC system in the desired location and orientation.

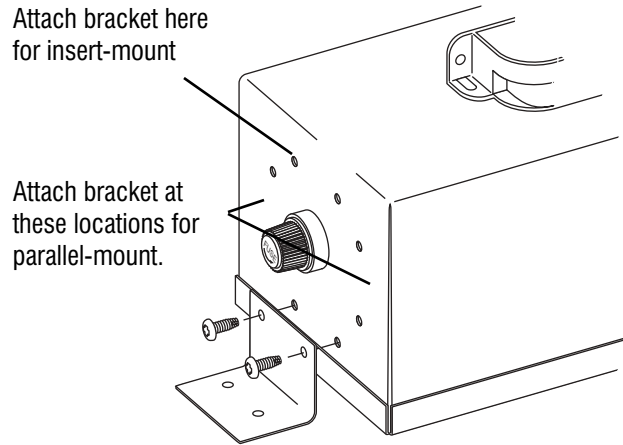


Fig. 4 Mount the brackets to the Nomad using the 3/8" mounting screws. Illustration shows perpendicular mounting.

Install the Nomad (Fig.4)

With the brackets attached, place the Nomad at the desired installation location and secure the brackets to the duct using the 1" mounting screws.

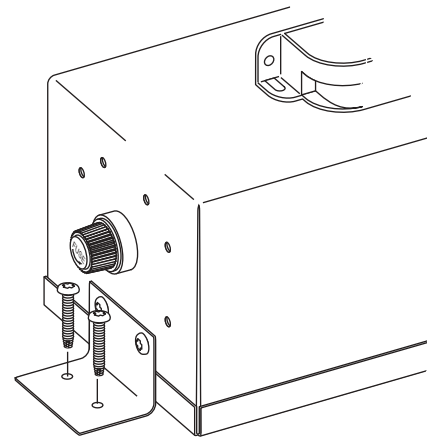


Fig. 4 Mount the Nomad to the duct using the 1" mounting screws.

⚠ CAUTION
Sharp Edge Hazard.
 Be careful of sharp edges on device and HVAC equipment while installing the device. Personal injury may result.

INSTALLING THE LAMP (Fig. 7)

To maximize the efficiency and life of the UV-C lamp, clean each lamp prior to installation. Use isopropyl alcohol and cotton cloth to wipe dust and fingerprints from the lamp.

Attach lamp to connector by inserting the front of the lamp into the connector first then gently snap the back of the lamp in place.

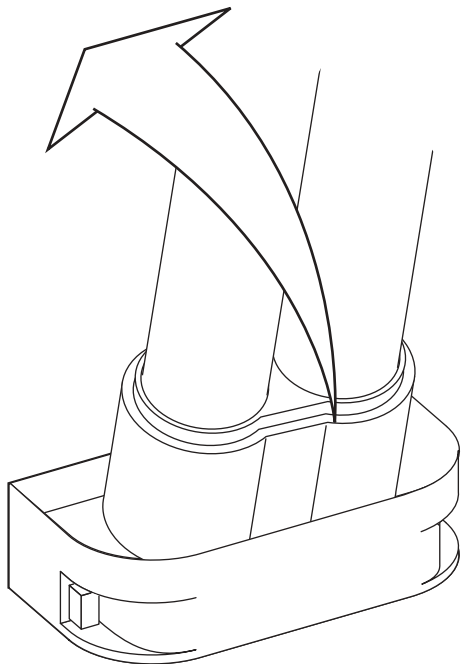


Fig. 7 Attach lamp to connector by inserting the front of the lamp first then snapping the back of the lamp into place.

⚠ WARNING

Mercury Hazard. Do Not Break.

Each UV-C lamp contains a small amount of Mercury. May cause redness or irritation. Use proper disposal techniques in case of breakage. See page 5.

FINISHING THE INSTALLATION

With the cover replaced, connect the Triad to proper power. The device power switch must be turned on and device checked for operation using the viewport. The lamp(s) should be radiating a bright blue light.

Install the Nomad 2 (Fig.4)

The Nomad 2 installs only in a perpendicular-mount orientation.

Place the Nomad 2 at the desired installation location and secure to duct with the included 1" mounting screws.

Optional spacers are provided to help prevent "sweating" where insulation is compacted. When using spacers use the 1.5" mounting screws included with the Nomad 2.

⚠ WARNING

UV-C Light Hazard.

UV-C light can cause temporary or permanent loss of vision, and sunburn. Take precautions to protect eyes and skin from direct exposure.

OPERATION

Under normal conditions the Bio-Fighter Triad should be operated continuously to extend the life of the lamp(s), and to increase the effectiveness in disinfecting the location selected.

A convenient power switch is located on the device, and should be turned off before any maintenance on the device or HVAC system is performed.

⚠ CAUTION

Clean lamp(s) prior to installation.

Failure to remove dirt and fingerprints from the lamp(s) could shorten their lifespan.

IF THE LAMP DOES NOT ILLUMINATE

- Check that the lamp connector is securely attached to lamp.
- Check that the fuse is in good working order. Replace if necessary.
- Check that proper power is being supplied to the device, and that switch lights when turned on.

LAMP REPLACEMENT(Annually)

The lamp should be replaced annually even if it appears to be operating normally. UV-C energy production diminishes over time.

1. Obtain the correct replacement lamp for your model.
2. Disconnect power to the equipment.
3. Open the cover of the device. *Allow lamp to cool 10 minutes before touching.*
4. Disconnect the electrical connector to the lamp.
5. Unscrew the two knurled nuts of the lamp retaining bracket and slide the bracket away from the lamp retaining lip.
6. Carefully remove the UV-C lamp and replace it with the new lamp. Be sure to clean the lamp of dust and fingerprints prior to installation.
7. Slide the retaining bracket back in place and tighten knurled nuts.
8. Reconnect electrical connector to the lamp.
9. Close the cover of the device.
10. Reconnect power.

⚠ WARNING

Burn Hazard.
During replacement, allow lamps to cool 10 minutes before removing them. Personal injury may result.

⚠ WARNING

Mercury Hazard. Do Not Break.
Each UV-C lamp contains a small amount of Mercury. May cause redness or irritation. Use proper disposal techniques in case of breakage.

FUSE REPLACEMENT

1. Disconnect power cord.
2. Unscrew the knob marked "Fuse" and remove fuse.
3. Install new fuse and screw knob back in place. Only use a 250V/3 amp fuse.
4. Reconnect power cord.

LAMP DISPOSAL

Dispose of your spent UV-C lamps at your local recycling center. You may also send your spent lamps in the same container you received your replacement lamps to:

Dust Free® Lamp Reclamation
1112 Industrial Park Drive
Royse City, TX 75189

PROPER CLEAN-UP TECHNIQUE IN CASE OF LAMP BREAKAGE

- Wear protective gloves, eyewear and mask.
- Sweep the broken glass and debris into a plastic bag, seal the bag, and dispose of properly. Contact your local waste management office for proper disposal.
- **Do not use a vacuum cleaner. Do not incinerate.**

Replacement Parts	Part No.
UV-C Lamp - 9"	06035
UV-C Lamp - 16"	06036
Ballast - 9"	06149
Ballast - 16"	06167
Ballast - 20" (120V)	06025
Ballast - 20" (230V)	06028
Power Cord	212107-00
Mounting Bracket (2)	-----
AHU Viewport	-----
Remote Safety Interlock	-----
Fuseholder	212225-00
Fuse	750-0108-001

For information on the dealer in your area call: 1-972-635-9564.
 Visit us at <http://www.dustfree.com>

LIMITED LIFETIME WARRANTY

Dust Free Inc. warrants this Bio-Fighter UV Light to be free from defects in materials and workmanship under normal use and service, for as long as it is owned by the original purchaser. This warranty does not cover UV-C lamp(s), which carry a one (1) year warranty from the date of installation, or the ballast(s) which carry(s) a three (3) year warranty.

This warranty does not cover cosmetic damage, damage due to acts of God, damage as a result of handling or shipment, negligence, misuse, connection to improper voltage, improper maintenance, or abuse. This warranty is void if defect(s) result from failure to have this unit installed by a qualified, properly licensed, heating and air conditioning contractor in compliance with all local building and construction codes.

Dust Free Inc.'s exclusive obligation under this warranty shall be to supply, without charge, a replacement for any covered component of the Bio-Fighter UV Light which is found to be defective within the parameters defined herein. Dust Free Inc. reserves the right to replace or repair the defective part or component.

DUST FREE INC. SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE OF ANY KIND, INCLUDING ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING, DIRECTLY OR INDIRECTLY, FROM ANY BREACH OF WARRANTY, EXPRESS OR IMPLIED, OR ANY OTHER FAILURE OF THIS PRODUCT. (Some states do not allow the exclusion or limitation of incidental or consequential damages, so this limitation may not apply to you.) THE WARRANTIES SET FORTH HEREIN ARE EXCLUSIVE AND DUST FREE INC. EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES, WHETHER WRITTEN OR ORAL, IMPLIED OR STATUTORY, INCLUDING BUT NOT LIMITED TO ANY WARRANTIES OF MERCHANTABILITY, WORKMANSHIP, OR FITNESS FOR A PARTICULAR USE. If the limited warranty is void due to failure to use a qualified contractor all disclaimers of implied warranties shall be effective upon installation.

How to make a warranty claim or have questions answered:

Should you have a warranty claim or questions about the warranty policy, contact the distributor or dealer from which you purchased the product. Proof of original purchase and proof of identity that the original purchasing party is filing the claim is required in order to initiate a warranty claim. Defective parts must be returned no later than thirty (30) days after the failure to the installing contractor together with the model number, serial number, and date of installation. All service and removal must be performed by a licensed HVAC contractor. You must pay shipping charges and all other costs of warranty service. Warranty is only valid the United States and Canada.

THIS WARRANTY SHALL NOT OBLIGATE THE MANUFACTURER FOR ANY LABOR COSTS AND SHALL NOT APPLY TO DEFECTS IN WORKMANSHIP OR MATERIALS FURNISHED BY THE INSTALLING CONTRACTOR AS CONTRASTED TO DEFECTS IN THE GERMICIDAL LIGHT ITSELF.

NOTE: Do not return any products or parts to the factory without a factory issued Return Authorization number issued by the Dust Free Inc. customer service department.

In the event you have any questions concerning the use and care of this product or this warranty which have not been answered to your satisfaction by the distributor or dealer, please call or write the factory.

Dust Free, Inc
PO Box 519
1112 Industrial Park Drive
Royse City, TX 75189
1-972-635-9564