



Mini Typhon™ Tower

USER MANUAL

English

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Safety



HIGH INTENSITY ULTRAVIOLET LIGHT RISK OF EXPOSURE TO ULTRAVIOLET RADIATION AVOID DIRECT EYE AND SKIN EXPOSURE



WARNING: This product can expose you to chemicals including mercury, which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov.



All Nemesis™ units are built and registered under our EPA™ registered facility #99690 as a Risk Group 3 UV-C product under 40 CFR 156

IMPORTANT SAFEGUARDS

When using electrical equipment, basic safety precautions should always be followed including the following:

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS

a) This equipment is designed for use with germicidal UV radiation sources and must be installed in compliance with competent technical directions to prevent risk of personal injury from UV radiation.



b) UV and optical radiation can be reflected by surrounding surfaces such as ceilings and walls. Since the reflective properties of surfaces can vary widely, it should be considered as part of site planning. Follow the manufacturer's recommendations for selecting appropriate ceiling and wall finishes.



c) IT IS THE RESPONSIBILITY OF THE INSTALLER TO OPERATOR THAT PERSONS WILL NOT BE EXPOSED TO EXCESSIVE UV OR OPTICAL RADIATION DURING EQUIPMENT OPERATION. THIS WILL REQUIRE THE OPERATOR TO CONDUCT AN ASSESSMENT OF THE AREA PRIOR TO USE



▲WARNING

d) Maintenance and servicing of this UV generating equipment shall be performed by authorized personnel. Service personnel must wear appropriate Personal Protective Equipment (PPE) if the equipment will be in operation during the maintenance or servicing work. Contact Nemesis™ UV-C for PPE recommendations and guidance.



▲WARNING

g) When replacing lamps, replace them only with the lamps for which the equipment is marked and intended.

▲WARNING

h) The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.

▲WARNING

i) Do not use this equipment for other than intended use.

▲WARNING

SAVE THESE INSTRUCTIONS

Never allow humans, animals or plants to have direct exposure of UV-C light without proper PPE. Since UV-C is not visible light, the fixtures have safety protocols built-in to avoid exposure. Many studies have been done on the effects of UV-C and the results show minimal effect in the short term. Studies have shown short term, temporary damage to the eye can be an effect of exposure to UV-C light. Long term exposure may produce fading or degradation of some materials. Amounts of degradation are completely dependent on types and quality of materials and if they have UV-C protection built-in. The FDA approved waivers on UV-A, UV-B and UV-C, more information is available from the FDA at: <https://www.fda.gov/media/136533/download>



For the proper, safe, and effective use of your device it is ESSENTIAL that the user follows all guidelines and instructions in this manual. Proper installation and use is essential for the effectiveness and safety of this product.

▲WARNING

Disconnect the device from power source before cleaning the device or replacing radiators (see page 16 for detailed instructions)

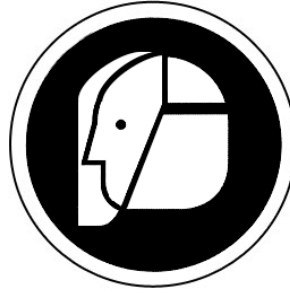
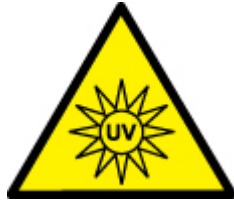


There are no serviceable parts inside the unit. DO NOT attempt to do any repairs beyond basic cleaning and lamp replacement. Any attempts to repair the unit will void the warranty. Nemesis™ is not responsible for any damages or harm caused by your repairs. Please contact Nemesis™ at: (469)-466-2UVC for repair assistance.

▲WARNING

WARNING: To guard against injury, basic safety precautions should be observed, including the following:

1. Read and save all notices, warnings and safety instructions received with equipment.



2. **Avoid exposure to direct or reflected germicidal ultraviolet rays. Germicidal ultraviolet rays are harmful to the eyes and skin.**
3. **Always disconnect power to the equipment and unplug before performing any service or maintenance.**
4. **Do not operate without proper electrical ground.**
5. Equipment is intended for indoor use only.
6. Do not alter the construction or design. Do not remove safety labels or devices
7. Do not use equipment for other than its intended purpose, as described in the equipment manual.
8. Keep inlet and outlet vents, clean and clear of objects.
9. **Over time germicidal ultraviolet rays may break down plastic, rubber, or other non-metallic materials, can fade colors, and can be damaging to plant life. Shield all plastic, rubber, or other non-metallic parts, plant life, etc. which may be exposed to direct or reflected germicidal ultraviolet rays.**
10. Do not operate equipment if the power cord and/or plug are damaged, or if any other damage to the unit is visible or suspected.
11. Utility power must match power requirements listed on the unit label.
12. Equipment should be protected from the elements and from temperatures below freezing.
13. Do not exceed equipment's maximum rated flow capacity and/or operating pressure.

CAUTION

DANGER

WARNING

CAUTION

Safety Warnings

All occupants and personnel should be alerted to the potential hazards indicated by the product safety labeling on this unit.

The following conventions are used to indicate and classify precautions and on product safety

labeling. Failure to observe precautions could result in injury to people or damage to property.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER

Danger indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury.

⚠ WARNING

Warning indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.

⚠ CAUTION

Caution indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.

CAUTION

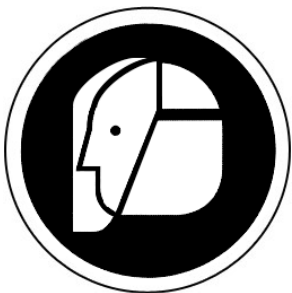
Caution used without the safety alert symbol indicates a potentially hazardous situation, which, if not avoided, may result in property damage.



This symbol / pictorial is used to identify an ELECTRICAL SHOCK or ELECTROCUTION hazard.



This symbol / pictorial is used to identify an ULTRAVIOLET LIGHT hazard.



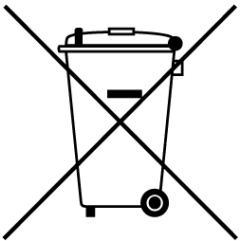
This symbol / pictorial is used to identify the need to wear approved ultraviolet resistant face shield.



The symbol / pictorial is used to identify the need to wear approved ultraviolet resistant eyewear.



This symbol / pictorial is used to identify the need to wear protective gloves.



*This symbol / pictorial is used to identify components which must not be disposed of in the trash.

Product safety labels should be periodically inspected and cleaned, as necessary, to maintain good legibility. Always replace illegible safety labels. Contact the factory to obtain replacement safety labels.

***Hg – RADIATORS CONTAIN MERCURY, manage in accord with disposal laws; see: LampRecycle.org OR contact Nemesis™: Email: support@nemesisuvc.com Phone (469)-466-2UVC (M-F, 9AM-5PM CST) and ask about our lamp recycling program.**

Unpacking

Your Typhon™™ fixture has been sent out in perfect working order. If the packaging appears damaged, carefully inspect your unit. If you find any damage, contact customer support before attempting to operate your unit.

Contents:

- 1 Nemesis™ Typhon™ Fixture w/ Nemesis™ Light Guard and 3 UV-C Radiators
- 1 Typhon™ Yoke
- 2 Yoke Knobs w/ rubber washers
- 1 Power Cable
- 1 Manual

ATTENTION: Operator MUST READ ENTIRE MANUAL before attempting to operate the fixture. Failure to follow instructions/guidelines laid out in this manual will void the warranty and could lead to physical harm.

Customer Support

The customer support line is available for any inquiries on your product. Visit <https://www.nemesisuvc.com/> or call (469)-466-2UVC, 8am-5pm CST M-F

For 24/7 support, contact: support@nemesisuvc.com

For servicing or repairs, contact: (469)-466-2UVC, or go to: <https://www.nemesisuvc.com/>

Limited Warranty

Terms and Conditions: This limited warranty is subject to the terms listed below.

For warranty service - Call: (469)-466-2UVC, 8am-5pm CST M-F

1. This warranty is void if:
 - a. The product serial number and/or labels are altered or removed
 - b. The product is modified in any manner that affects the reliability of the product
 - c. The product has been repaired or serviced by anyone other than a trained Nemesis™ technician
 - d. The product is damaged because it is not properly maintained as set forth in the product instructions, guidelines and/or user manual
2. This is not a service contract, and this warranty does not include routine cleaning or periodic check-up.
3. Nemesis™ reserves the right to make changes in design and/or performance improvements upon its products without any obligation to include these changes in any products manufactured prior.
4. This is the only written warranty applicable to this product and supersedes all prior warranties and written descriptions of warranty terms and conditions published
5. Warranty is limited to one years from date of purchase.

Activate Your Warranty:

Send the following information to: sales@nemesisuvc.com

Name/Company	Where Purchased
Product Model/Name	Physical Address
Date of Purchase	Email Address

Activating your warranty signifies that you have read and understand the limited warranty listed above. **YOU MUST ACTIVATE YOUR WARRANTY WITHIN TWO WEEKS OF THE PURCHASE DATE**

Benefits of UVC Technology:

- UVC radiation has been proven to be effective against waterborne and airborne pathogenic micro-organisms including those responsible for cholera, hepatitis, polio, typhoid, giardia, cryptosporidium and many other bacterial, viral and parasitic diseases
- UVC installations have low capital and operation cost
- UVC installations are easy to operate and to maintain
- UVC radiation works instantly and the effectiveness does not depend on the temperature
- UVC disinfection is a physical process: no substances are added
- The UVC disinfection effect is directly related to the UV dose (which is the product of intensity and exposure time of the micro-organisms) so it's effectiveness can be simply measured once the system design is validated

UV-C Disclaimer

The products being sold pursuant to this Agreement must be installed correctly and used properly to be effective. Nemesis™ is not responsible for improper installation, usage or damages caused by the end user. Nemesis™ makes no representations, guarantees or assurances as to the final effectiveness of using a UV-C lighting system for sanitization. Nemesis™ warrants that with proper installation and usage, scientific evidence exists proving the effectiveness of UV-C sanitation. Nemesis™ does not warrant that 100% of viruses, bacteria and germs shall be eliminated. Effective

UV-C sanitation times are calculated by information provided by the specific radiator manufacturer. Times vary according to radiator, distance, dosage and type of viruses, bacteria, germ or mold to be eliminated. Customer understands and accepts that the use of UV-C lighting can cause fading and discoloration of some materials over extensive prolonged exposure and that Nemesis™ is not responsible for any damages whatsoever to any materials or equipment due to the use of the products.

General Guidelines:

DO NOT attempt any repairs on the Typhon™. Anything beyond replacing the radiator and basic cleaning must be done by a trained technician. Attempts to repair the device will void the warranty.

Ensure the area being disinfected is clear of any occupants, animals or other living things.

Avoid touching the radiators. Oils and moisture from the skin can cause the coating on the radiator to deteriorate. Light dusting can be done carefully with a fresh, dry, lint-free cloth. Be careful when replacing radiators.

Check fixtures for dust at least once a month. Routine cleaning can be done with a fresh, dry, lint-free cloth or with an air compressor at very low psi. See page 16 for more detailed instructions on cleaning your Typhon™.

Take care when cleaning debris from broken radiators. DO NOT dispose with household waste, follow your local hazardous waste guidelines.

For any questions or concerns, contact the Nemesis™ Customer Service Line 24/7 at:

(469)-466-2UVC

Technical Specifications/Fixture Overview:

Features:

- Emits germicidal wavelength of 254nm.
- Kills 99% of all viruses and bacteria.
- Motion activated temporary shutdown.
- Audible alerts during use.
- Visual alerts during use.
- Safe and environmental- No harsh chemicals, No landfill.
- Designed in the USA. Manufactured in the USA. Ships from the USA.

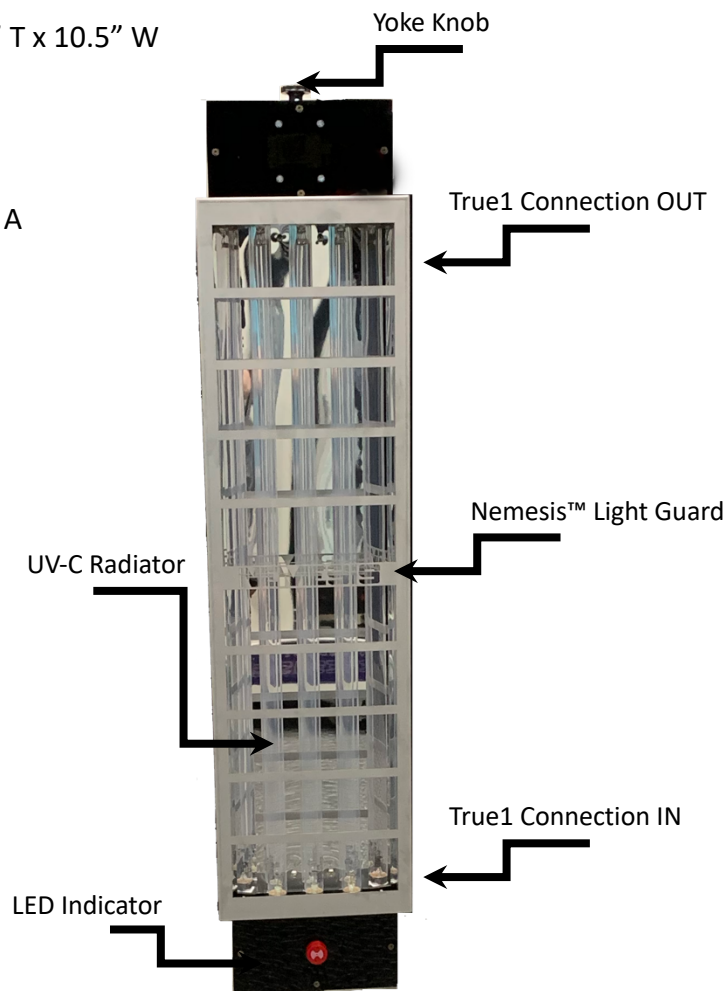
Lamp Source: TUV 55 W HO lamp technology

Dimensions: Height: 49.5" T x 10.5" W

Weight: 29.5 lbs

Input voltage:
AC 90-120V, 50/60Hz, 1.6 A

Rating: Indoor use only



How do I use my Nemesis™ Typhon™?

Step 1: Unpack your unit and ensure the fixture is in proper working order.

Step 2: Mount/Place the fixture in the desired location. Utilize the knobs at the top and base of the unit to adjust the yoke.

Step 3: Determine the distance between the Typhon™ fixture and what you are disinfecting. See page 10 to determine disinfection time.

Step 4: Ensure the area being disinfected is clear of any occupants, animals or other living things.

Step 5: Plug in/send power to the fixture to begin disinfection.

Step 6: You will hear an alert running as soon as the system starts. The disinfection time starts one minute from activation. Then run for the determined amount of time based on distance and Joules desired.

Step 7: Deactivate the unit at the completion of pre-determined disinfection time before re-entering the space or moving the fixture.

Disinfection Times*

1. Measure the distance from your fixture to the surface(s) being disinfected.
2. A general guideline for time is included below:

*Time calculated to reach 120 Joules of disinfection

120 Joules	
Feet from Typhon:	Time (Minutes):
1	1
2	1
3	1
4	2
5	3
6	5
7	7
8	9
9	11
10	13
11	16
12	19
13	23
14	26
15	30
16	35
17	39
18	44
19	49
20	54
21	60
22	65
23	71
24	78
25	84

**Note: Times are calculated but may not be 100% accurate for specific rooms. A specific measurement for your space is necessary for complete efficacy and efficiency.*

Cleaning:

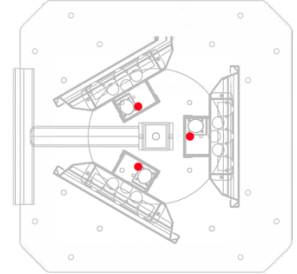
- Check all fixtures on the Tower monthly for dust and other contaminants.
- Unplug fixture from AC power before performing any maintenance.
- Never use alcohol or solvents
- Use vacuum or air compressor (on low PSI setting) and soft brush to remove dust on fixtures & vents
- Clean fixture with a fresh, dry lint-free cloth
- Dust radiators lightly with a microfiber cloth, DO NOT touch the radiators with bare hands

Replacing Radiators:

- Remove the Nemesis™ light guard by loosening the four thumb screws located at the corners on the back of the fixture. Then slide the Nemesis™ light guard up and off of the fixture. This will allow you to access the radiators.
- DO NOT touch radiators with bare hands, oils from the skin will deteriorate the coating on the outside of the glass, use sterile gloves and eye protection when working with radiators
- Twist the top and bottom of the radiator ¼ turn to 'unlock' the radiator from the socket
- Remove the old radiator
- Place one end of the new radiator into the socket, gently apply pressure to depress the socket and allow the other end of the radiator to slide into place
- Twist the top and bottom of the radiator ¼ turn to 'lock' it into place
- Test the unit to ensure proper installation of radiators.
- For any issues, contact Nemesis™ Customer Support at: (469)-466-2UVC

Mini Tower Assembly:

1. Unpack all parts and hardware
2. Assemble the center post by bolting the handle to the top and bottom portions of the center post
3. Attach the rectangular bottom plate to the center post
4. Attach Typhon™ Fixtures
 - a. For Three Typhon™ Fixtures use the holes for the triangular configuration:
 - b. Ensure the handle will be centered between Typhon™ fixtures as pictured. Ensure the Typhon™ fixtures are positioned correctly.



5. Bolt Typhon™ fixtures into the bottom plate
6. Once all Typhon™ Fixtures are mounted to the bottom plate, line up the holes at the top of the fixture with the corresponding holes on the top plate.
7. Utilize the HARDWARE to attach the Typhon™ Fixtures to the Top Plate
8. Once all fixtures are attached to the top plate, secure the top plate with the center bolt.
9. The Mini Tower is built! Take a moment to ensure all hardware is properly attached to the fixture.

- If you have any issues, contact Nemesis™ Customer Support at: (469)-466-2UVC

Power

1. Included with your Mini Tower is 1 Power Cable and 3 Power Jumpers to power the Typhon™ fixtures
2. The Power Cable needs to be plugged into the Tru1 POWER IN connection on the side with the Red Buzzer
3. The Power Jumpers:
 - a. One end will plug into the “POWER OUT” connection on the sensor side (opposite the POWER IN on the Buzzer Side)
 - b. The other will plug into the POWER IN connection on the adjacent fixture.
 - c. Repeat this process until all Typhon™ units have power
 - d. one



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www.nemesisuvc.com

(469) 466-2UVC