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Installation & Operations Manual for Energenics UV-MAX Conveyor



FOLLOW PROCEDURE BELOW FOR SAFE OPERATION

1. Always wear Safety Glasses, ZERO Exposure to eyes and skin!
2. Mount fixture to conveyor using supplied Brackets and Hardware.
3. Supply Power.
4. Failure to follow these instructions will likely cause injury and blindness.

WARNINGS AND CAUTION

This manual will serve as your reference guide for installation, operation, and service of your system. This manual will provide reference to all parts, warranty, and support.

Purpose: The Energenics UV-MAX Conveyor system has been designed to offer direct disinfection exposure to surface areas. The system design allows for microbial disinfection control. The Energenics UV-MAX Conveyor system was developed as a cleaning device utilizing Ultraviolet Light for direct exposure disinfection.

Safety: The Energenics UV-MAX Conveyor is designed for zero user exposure to Ultraviolet light. We will review the safety factors for Ultraviolet Light below for knowledge and understanding.

Protective Clothing and Eyewear

It is not recommended that any personnel be subject to direct UV exposure, but in the event such exposure is likely, personnel should wear protective clothing, including full coverage of exposed skin if possible and protection of eyes with eyewear. Gloves should be used to protect the hands.

Most UV protective eyewear at 99.9% will work however it is preferable to use UV Safety glasses designed to filter UVC.

Not all glasses offer complete coverage or UVC filtering.

Protective goggles of the wrap-around type are to be preferred since UV may enter partly opened goggles through oblique angles.



OSHA Guidelines for Ultraviolet Exposure:

OSHA does provide technical guidance regarding protecting employees from ultraviolet light with respect to laser hazards. You can find this guidance in the ([OSHA Technical Manual \(TED 1-0.15A, Section III - Chapter 6\)](#)). The relevant chapter includes information on control measures and safety programs for laser hazards associated with exposure to ultraviolet light. This is the best documented guideline available.

Safety Issues

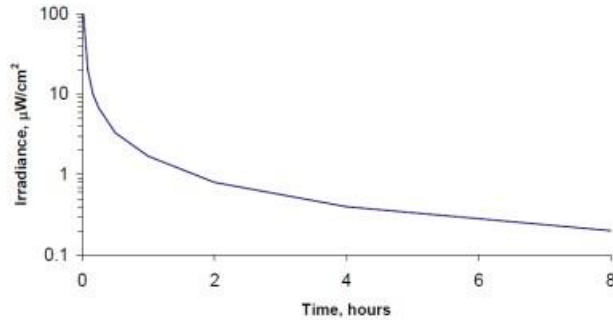
UV Light is dangerous and the effects of UV exposure are similar to that of a welding ARC, we are concerned with the direct and reflective effects.

ACGIH Limits

Exposure to UV can produce eye injuries and skin erythema. These effects are considered transient. UV may also be carcinogenic but since it has very limited penetrating ability it is unlikely to cause damage to anything besides outer layers of skin or other exposed surfaces.

NIOSH Limits

The National Institute of Occupational Safety and Health (NIOSH) provide a recommended exposure level (REL) for UVGI at 6 mJ/cm^2 (or 0.006 J/cm^2). Both the ACGIH and NIOSH limits are effectively identical and can be represented graphically below.




The Energenics UV-MAX Conveyor is designed for maximum disinfection through the shortest exposure time. The system design provides the optimum in:

- ✓ UV Intensity
- ✓ Rugged Design
- ✓ User safety protection

System Delivery:

When you get your system, you will need to unpack and inspect the system:

1. Unpack your new system and inspect inside and outside for damage.
 If damage is present, contact Energenics prior to use 239-643-1711
2. Verify lamp installation
3. Using the power cord, plug the system in
4. Power the unit on
5. Your Energenics UV-MAX system is now ready for operation

SAFETY OBSERVATION: It is required for the person(s) responsible for the installation of this equipment, operators of equipment, and operation managers review and understand this manual.

USE OF LISTED SYSTEM / EQUIPMENT MUST COMPLY WITH INSTRUCTIONS AND SAFETY REQUIREMENTS.

Operation Overview:

SAFETY: We cannot speak too much regarding safety. You should never look directly at a UV lamp or the reflection!

Operation:

- A. Review system for condition.
 - a. There should be no physical damage to the system
 - b. Lamps shall be clean
 - c. System Frame shall be in good condition
- B. Plug in system power cord
- C. Safety – Confirm there is ZERO UV exposure to personnel
- D. Operate system

System Care:

The Energenics UV-MAX Conveyor is designed for repeat performance and constant interaction. Based on the system design there is little care needed. If you follow the following steps your system will last for years of disinfection.

- 1. Inspect the system interior and exterior lamp for clean conditions
- 2. Clean as needed
- 3. It is recommended to test the system performance
- 4. Change the lamps at 8000 Hours

The above steps are listed as the basic level of care, should the system be utilized in a heavy work environment, further care may be required.

Troubleshooting:

The below statements are listed as a troubleshooting guideline. Further information is provided through energetics support.

Q: What should I do if the system will not turn on?
A: Verify the power to the system is correct

A: Inspect the lamp for age or damage

Q: My system is running fine; how do I verify the lamp output is correct?

A: Test the system performance