

**UVEN**  
**Disinfection system which**  
**deactivates viruses**  
**and bacteria**



## Environments with risk of spreading infection

Viruses and bacteria that spread have a major impact on the population's health and various activities became clear during the Covid pandemic. It has become increasingly important to ensure vulnerable environments where viruses and bacteria can easily spread. Frequently visited rooms have an extra high risk of spreading infection, such as bathrooms and locker rooms

**Deactivates**

>90% SARS-CoV-2

>99% E. coli

>99% Salmonella

**in 2 minutes**



## Deactivation of Viruses and Bacteria

In two minutes, the UVEN disinfection system deactivates viruses and bacteria. Both air and surfaces are automatically disinfected with UVC light after the room has been used.

Through a security system with radar, infrared sensors and door sensor, the slightest movement and presence is detected. At the slightest movement, the system immediately switches from UVC light to regular lighting. UVEN has been verified through extensive testing, specifically for SARS-CoV-2, at the Swedish Defense Research Agency.

- ✓ Fast, safe, and fully automated deactivation of viruses and bacteria from air and surfaces
- ✓ Requires no manual handling
- ✓ Number of disinfections > 300,000/lifetime
- ✓ Reduces transmission of infections
- ✓ Results in decreased sick leave costs and reduced business disruption
- ✓ Reduces manual disinfection with chemicals

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Two minute disinfection cycle; UV-C dose 1.4 mJ/cm<sup>2</sup>. This dose corresponds to: Inactivation of >90% SARS-CoV-2<sup>1,2,3</sup>, >99% E. coli<sup>4,5</sup>, Salmonella<sup>4</sup>

1.) Uven disinfection evaluation with SARS-CoV-2 plaque assay, Swedish Defence Research Agency, 2021

2.) Quantitative evaluation of SARS-CoV-2 inactivation using a deep ultraviolet light-emitting diode, Minamikawa, T., Koma, T., Suzuki, A. et al., Sci Rep, 2021

3.) UV-LED disinfection of Coronavirus: Wavelength effect, Gerchman, Y., Mamane, H., Friedman, N., Mandelboim, M., J. Photobiology and Photochemistry B: Biology, 2020

4.) Fundamental Characteristics of Deep-UV Light-Emitting Diodes and Their Application To Control Foodborne Pathogens, Joo-Yeon Shin, Soo-Ji Kim, Do-Kyun Kim, Dong-Hyun Kang, Food Microbiology, 2015

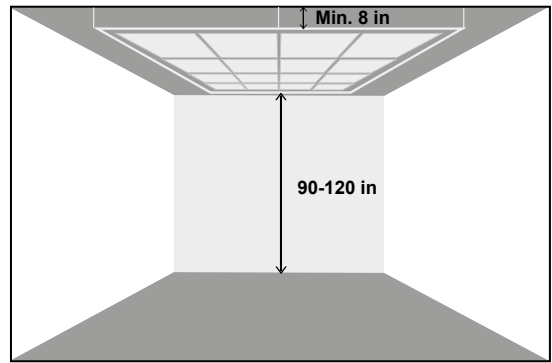
5.) Inactivation of Listeria and E. coli by Deep-UV LED: effect of substrate conditions on inactivation kinetics., Cheng, Y., Chen, H., Sánchez Basurto, L.A. et al., Sci Rep, 2020.

6.) Disinfection of Methicillin-Resistant Staphylococcus aureus, Vancomycin-resistant Enterococcus faecium and Acinetobacterbaumannii using Klaran WD array system, Richard M. Mariita, Rajul V. Randive, bioRxiv, 2020.

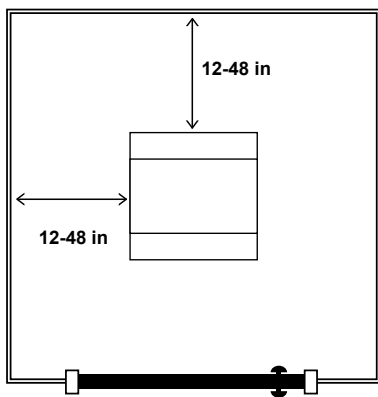
# Installation requirements

## Conditions

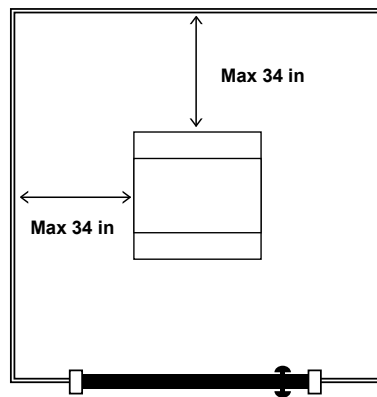
1. Closed room (solid walls, fixed windows, closable door).
2. The suspended ceiling grid system must sustain the weight of UVEN unit(s); 21.5 lb per unit.



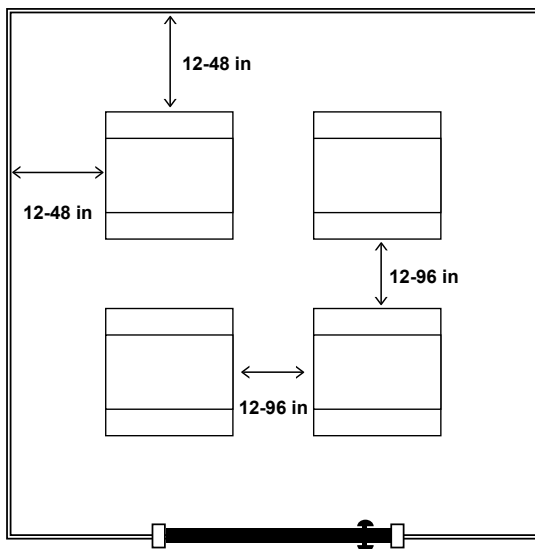
A supporting structure where the minimum height between ceiling grid system and inner ceiling is 8 in. Ceiling height between 90 and 120 in, measured from floor to suspended ceiling.



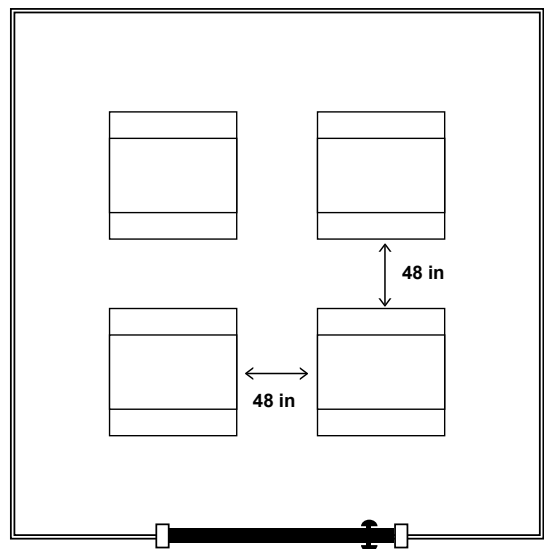
The distance between wall and 1 UVEN unit shall be between 12 and 48 in.



To get a sufficient disinfection dosage the recommended maximum distance from wall to UVEN unit is 34 in.



The distance between several UVEN units shall be between 12 and 96 in.



To get a homogeneous disinfection distribution the recommended distance between UVEN units is 48 in.

