

COMBAT DUO₃

Ultraviolet light & ozone treatment

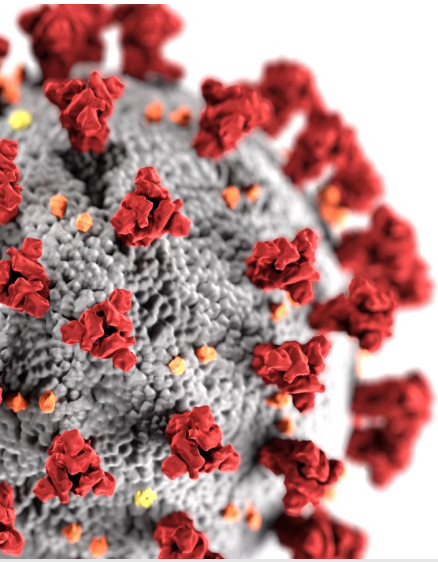


Global Environmental Disinfection

The Worlds Only UVC + OZONE Dual Mode System
for hospitals, clinics, or any facility serving the general public

The New Normal

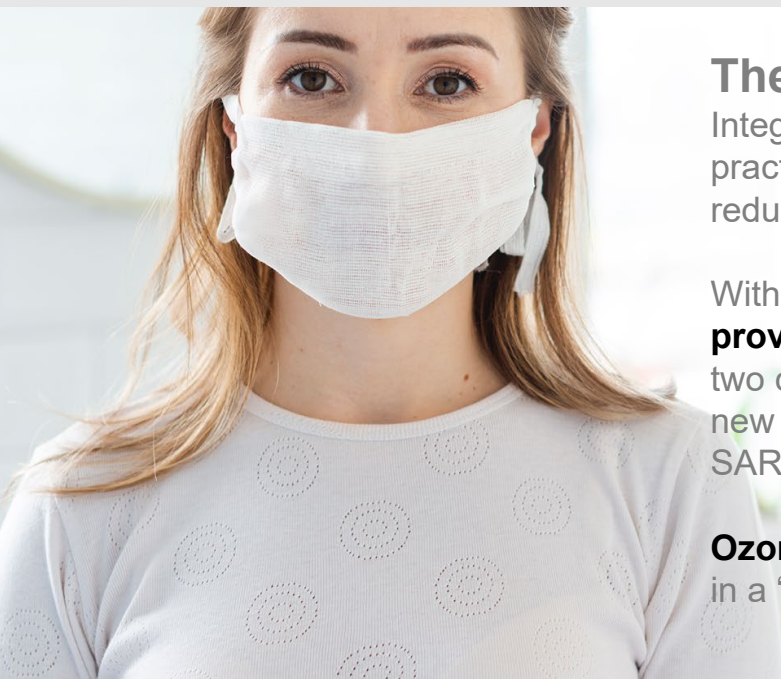
Traditional cleaning with EPA approved disinfectants remains standard practice, but multiple studies have shown that the **manual disinfection is only around 50% effective.**⁷



Environmental Disinfection

SARS CoV2 (COVID-19) and other challenging **viruses can live on plastic and steel surfaces for several days**, which require innovation in our disinfection standards.

Together, we can do better!



There is an answer!

Integrating technological innovation with existing practises can elevate the disinfection standards and reduce risk.

With peak effectiveness at 254nm, UV light has been **proven to inactivate bacteria and viruses** including two coronaviruses: SARS-CoV and MERS-Cov ^{5,6,7} with new studies demonstrating 99.99% deactivation of SARS CoV2 (COVID-19).⁸

Ozone can be delivered to areas that may be hidden in a “shadow” from the UV light.

The Evolution of Environmental Disinfection

UV-C + OZONE

UV-C and Ozone are both proven technologies for non-contact disinfection which can be used independently or sequentially.



The Value of Time

With new cleaning requirements between cases, clinicians face a new challenge of reduced productivity and increased risk.

The new COMVAT DUO3 Dual Mode Global Disinfection Robot **can disinfect a room in as little as 6 – 11 minutes**, ensuring compliance with cleaning guidelines while maintaining regular patient flow – a value to patients, staff & practitioners!



Clinicians' Fiduciary Responsibility

Safety is PARAMOUNT

UVC+OZONE disinfection robot technology is an

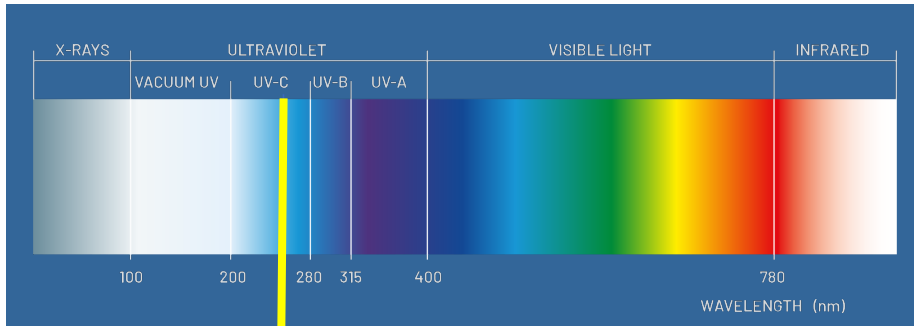
- ✓ effective,
- ✓ affordable, and
- ✓ easy to implement

technology that helps maintain a safer environment.

Therefore, you can focus on **continued safe operations, stable patient flow, new patient referrals, decreased fallow times, and profitable revenue growth.**



UVC MODE



254
CELL INACTIVATION
OF MICROORGANISMS

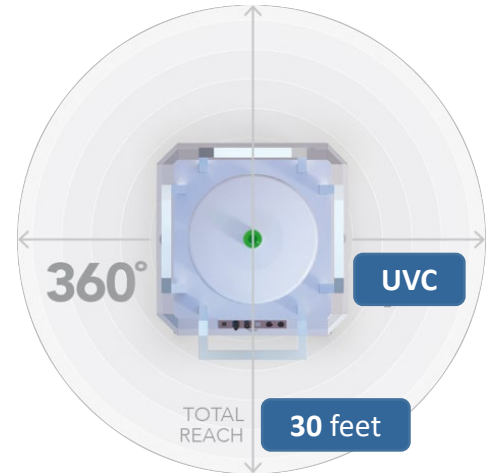
Ultraviolet germicidal irradiation (UVGI) at a wavelength of 254nm destroys the ability of microorganisms to reproduce by causing photo-chemical changes in the nucleic acids (DNA and RNA).¹

The **15 high performance lamps** deliver energy levels recommended in major academic studies and international publications and are capable of eradicating target microorganisms **in as little as 6 minutes in a space of up to 600 ft²**.

At 254nm, UV light **inactivates coronaviruses** including:

- COVID 19⁸
- SARS-CoV²
- MERS-CoV ^{3,4}

CYCLES
DISINFECTION
6-11 min

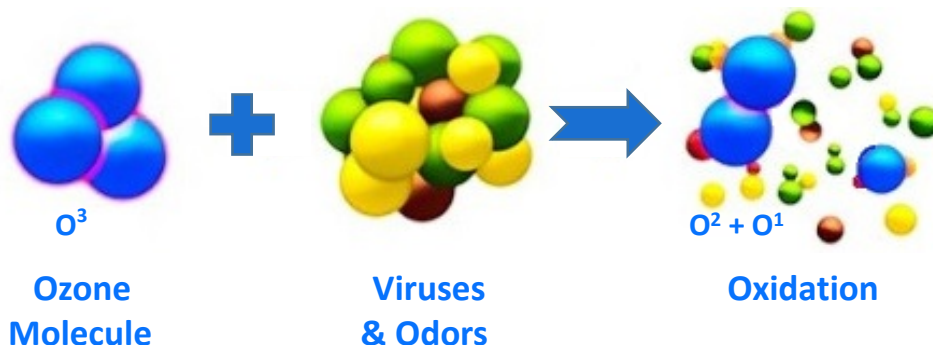


OZONE MODE



Ozone is a **powerful disinfectant** against viruses in the air⁵ and can be circulated in large areas that might be in a “shadow” from direct UV-C light.

COMVAT DUO₃ delivers up to 15g/h of O₃ (ozone) to ensure **efficient and effective decontamination**.



Ozone **destroys the targets** via the chemical oxidation process.

360 SHADOWLESS MODE

Choose between **3 disinfection modes**, based on the level of contamination and available time.



UVC mode
Light disinfection

Disinfection for frequent use
between patients

6-11 min



O₃ mode
Ozone disinfection

Thorough disinfection
on-time use

50 min*



360 mode
UVC disinfection + ozone

Rigorous disinfection. Ideal for
high risk spaces and hidden corners

6-11 min + 50 min*



360
SHADOWLESS

With **360 Shadowless** mode, users obtain complete disinfection of the most difficult areas.



50%
MANUAL

40%
UVC

10%
OZONE

TECHNOLOGY



O₃ sensor



Tablet
for ease of use,
configuration,
and remote
control



Red light Do not enter.
Treatment in process



Amber traffic light Do not enter.
O₃ decomposition phase



Green traffic light Safe passage.
Treatment finished

15 lamps disinfect
larger areas in
shorter time.

Protective Rails
can also be used for transport

**Additional
Control Panel**
with delayed activation for
safe, manual operation

4 Motion Detectors
automatically halt
operation when
motion detected in
the room

4 Multi-directional Wheels
for enhanced mobility

O₃ outlet
at rear of unit

INTERmedic
LASER & LIGHT SOLUTIONS

The emerging challenge

Several studies have shown that the risk of contracting *MRSA*, *VRE*, *Acinetobacter*, *Pseudomonas* or *C. difficile* is increased when a new patient occupies a room previously occupied by a patient infected with one of these pathogens. **Such pathogens can survive on surfaces for four days**, unless the cleaning process eliminates them.⁶

A permanent problem

Multiple studies have shown that **less than 50% of room surfaces are thoroughly cleaned** and disinfected when chemical germicides are used.⁷

UV-C + Ozone breaks the infection chain

The automated system with germicidal lamps and ozone **demonstrated superior decontamination** on surfaces.⁶

The Benefits of COMVAT DUO₃

-  **PROVEN RESULTS** – improved decontamination by combining multiple technologies in the world's only global UVC/O₃ disinfection system.
-  **SAFE & ACCURATE** – triple layer of security with multiple acoustic sensors, optical sensors, and software-controlled exact dosage calculation.
-  **PRACTICAL & EASY to USE** – tablet or manual control, portable, easy to move, complete operator training included with device.
-  **LOWEST TOTAL COST OF OWNERSHIP** means **enhanced ROI**. In addition to the competitive capital and maintenance costs, the COMVAT DUO₃ reduces the costs of HAI's while maintaining business operations and revenue flow.
-  **MULTI-DISCIPLINARY** – Identical benefit for all front line workers, fire, ambulance, police, airlines, rail, public transit, clinics, correctional services, fitness facilities, retirement homes, universities, professional sports teams, etc.



The Worlds Only UVC + O₃ Global Disinfection System

FOR MORE INFORMATION:

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1. Kowalski, Wladyslaw. (2009). Ultraviolet Germicidal Irradiation Handbook. 10.1007/978-3-642-01999-9_2. 2. "Large-scale preparation of UV-inactivated SARS coronavirus virions for vaccine antigen," Tsunetsugu-Yokota Y et al. Methods Mol Biol. 2008;454:119-26. doi: 10.1007/978-1-59745-181-9_11. 3. "Efficacy of an Automated Multiple Emitter Whole-Room Ultraviolet-C Disinfection System Against Coronaviruses MHV and MERS-CoV," Bedell K et al. ICHIE 2016 May;37(5):598-9. doi:10.1017/ice.2015.348. Epub 2016 Jan 28. 4. "Focus on Surface Disinfection When Fighting COVID-19"; William A. Rutala, PhD, MPH, CIC, David J. Weber, MD, MPH; Infection Control Today, March 20, 2020 (<https://www.infectioncontroltoday.com/covid-19/focus-surface-disinfection-when-fighting-covid-19>) 5. Marie-Eve Dubui, et All. Ozone efficacy for the control of airborne viruses: Bacteriophage and norovirus models. April 10, 2020. 6. [https://wiki.ecdc.europa.eu/feml/Pages/Hospital cleaning and decontamination.aspx](https://wiki.ecdc.europa.eu/feml/Pages/Hospital%20cleaning%20and%20decontamination.aspx) 7. Weber, D. & Rutala, W. (2013) Understanding and Preventing Transmission of Healthcare Associated Pathogens due to the Contaminated Hospital Environment. Infection Control and Hospital Epidemiology 34(5), 449-452, doi:10.1086/670223. 8. Dutton, G. (2020, June 19). UV-C Light Kills SARS-CoV-2, Triggering Novel Lighting Options for Public Spaces.

