



Clean Zonez Science

In returning to work, people are looking for safe spaces. Clean Zonez Panels do far more than create a physical barrier and enhance the acoustics of the workplace. Clean Zonez patent pending technology incorporates six layers of air filtration to help capture and clean the air in an individual's workspace.

Clean Zonez Air Filtration Unit		
Filter Layer	Filtration system	Function
Layer one	Primary anti-microbio filter	Filter large particles or hair, PM10 and pollen
Layer two	High efficiency true HEPA filter	Filter PM2.5, source of allergy, powder, bacteria, virus and mycete
Layer three	Honeycomb activated carbon filter	Eliminate peculiar smell, absorb harmful gas
Layer four	Cold catalyst filter	Efficiently resolve formaldehyde, benzene, ammonia gas, TVOC, sulfuretted hydrogen or other harmful gas
Layer five	UVC sterilization	Efficiently kill bacteria and inactivate viruses
Layer six	Negative ION	Eliminate dust, freshen the air, remove indoor static electricity for sterilization

Clean Zonez Air Filtration System specifications:

Clean Zonez Air Filtration Unit			
Rated Voltage	AC 110V	Rated Power	8.5W
Rated Frequency	50Hz	Filtration	6 layers
Air Volume (CFM)	65 CFM	True HEPA Efficiency	99.97%
CADR	64.98	Net Weight	4 lbs 13 oz
Application Area	100 sf	Size	13 3/16" x 11 7/16" x 2 12/16"



Honeycomb Activated Carbon Filtering

Activated carbon is a bed of activated carbon typically in granular or powdered block form, and consists of millions of tiny absorbent pores. This air filter has been treated to be extremely porous, and this is the popular filtration against gases, chemicals and Volatile Organic Compounds (VOCs).

HEPA Filtration

“HEPA is a type of pleated mechanical air filter. It is an acronym for "high efficiency particulate air [filter]" (as officially defined by the U.S. Dept. of Energy). This type of air filter can remove up to 99.97% of dust, pollen, mold, bacteria, and any airborne particles with a size of 0.3 microns (μm). The diameter specification of 0.3 microns responds to the worst case; the most penetrating particle size (MPPS). Particles that are larger or smaller are trapped with even higher efficiency. Using the worst-case particle size results in the worst case efficiency rating (i.e. 99.97% or better for all particle sizes).” Source – EPA

An additional source on HEPA is found in <https://www.cdc.gov/niosh/docs/2003-136/pdfs/2003-136.pdf?id=10.26616/NIOSH PUB2003136>

UV-C Light

UV-C has been used for equipment and room sterilization for years by healthcare organizations in an application known as ultraviolet germicidal irradiation.

“Since UV-C rays are blocked by the ozone layer, microorganisms have not developed a natural defense against UV-C energy. When the DNA of a microorganism absorbs UV-C energy, molecular instability occurs, resulting in the disruption of the DNA sequence. This renders the cell unable to grow or reproduce. Without the ability to reproduce, the cell cannot infect and it rapidly dies.” From Ultraviolet Devices, Inc.

Additional science references addressing UV-C and COVID-19 can be found at:

- <http://www.iuva.org/IUVA-Fact-Sheet-on-UV-Disinfection-for-COVID-19>
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6801766/>
- <https://aem.asm.org/content/84/17/e00944-18>
- <https://www.uvdi.com/uvdi-university/uv-basics/>
- <https://www.health.harvard.edu/diseases-and-conditions/covid-19-basics>



PET (polyethylene terephthalate)

Clean Zonez Panels are constructed using 3 layers PET with inserted steel plates to add rigidity. The PET is thermoformed around the back of the Clean Zonez Air Filtration System to tightly secure the unit and enclose the air filtration system inside the panel, creating a very clean look. The panel provides both a physical and acoustical barrier. The physical barrier blocks particles from sneezes and coughs, where they either die over time or can be cleaned with a disinfecting spray. The acoustical barrier helps mitigate the sound of the fans as well as provides a level of acoustical privacy for those in the area.

With 60% of its content being recycled water bottles, PET can be continuously recycled for an earth-friendly material.

Note: Clean Zonez Panels are constructed using materials, systems, products and science that have all been thoroughly tested for years. Clean Zonez Panels are the first of its kind to incorporate the physical and acoustical benefits of PET panels with an air filtration unit to clean the air. Clean Zonez can be a part of a broad set of initiatives to welcome people back to work.