

EnviroKlenz® vs. Cannabis Smoke and Odors



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INTRODUCTION

EnviroKlenz[®] is a revolutionary, non-invasive, odor elimination process that can rapidly restore an odor-compromised property.

When a property has an acute odor issue caused by fire, water, trauma, or other nuisance odors or chemicals, EnviroKlenz[®] can be immediately deployed to begin restoring the environment.

EnviroKlenz[®] is the most environmentally friendly odor restoration process available. It removes the airborne odor-causing molecules without releasing chemicals into the air.

The EnviroKlenz[®] core chemistry (the "Product") irreversibly captures and neutralizes a broad range of indoor air pollutants. EnviroKlenz[®] works by 'destructive adsorption.' As EnviroKlenz[®] comes in contact with chemical pollutants in circulating air or on surfaces of materials, the Product's chemistry 1) irreversibly attaches to and reacts with the pollutants, and 2) destroys/neutralizes the pollutant. The irreversible result is a benign, environmentally safe byproduct and elimination of the unpleasant and potentially dangerous pollutant(s).

The EnviroKlenz[®] Process is the scientifically and field proved choice for the safe, rapid, convenient, and cost-effective restoration of indoor spaces from fragrances and other toxic vapors.

To be effective, the Product must:

come into contact with the chemical pollutants in the air or on the surface(s) within
the enclosed residential, commercial, or mobile space,

2 at an air flow rate, contact time, treatment schedule, temperature, humidity, and/ or concentration, as prescribed for the specific application, and

3 be deployed by personnel who are thoroughly familiar with the instructions for use and in accordance with instructions detailed in the EnviroKlenz[®] User Guide and/or instruction sheet, and other Product labeling.



The odors from cannabis smoke are the result of many different chemical compounds. These can include, but are not limited to:

Cannabinoids	Sugars	Esters
Nitrogen Compounds	Hydrocarbons	Lactones
Amino Acids	Alcohols	Steroids
Proteins	Ketones	Terpenes
Glycoproteins	Acids	Phenols
Enzymes	Fatty Acids	Flavonoids

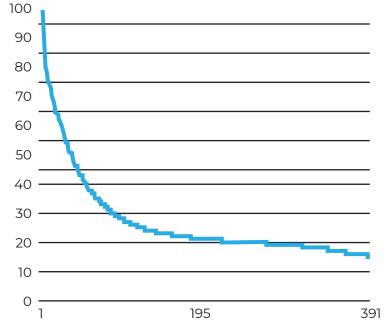
The composition of EnviroKlenz[®] products, especially the active components used in the air cartridge in the EnviroKlenz[®] Mobile Air System, favorably interact the with the diversity of chemicals found in the smoke and residual of cannabis.

The chemically reactive compounds, like some of the acids, phenols, nitrogen compounds and cannabinoids are broken down by EnviroKlenz[®]. The predominantly hydrocarbon compounds can be adsorbed and retained by high surface area EnviroKlenz. The larger particulate compounds can be captured by the filter and the fine particulate can be captured by the HEPA filter in the EnviroKlenz[®] Mobile Air System.

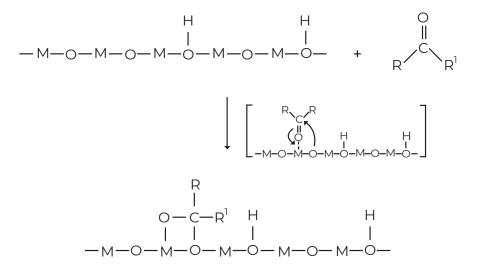
The EnviroKlenz[®] Mobile Air System and Air Cartridges have been used to successfully reduce and contain odors from the storage of the cannabis compound in law enforcement centers (i.e. drug safes), assist in cleanup of contaminated properties, and lower the concentration of cigarette smoke in apartments with an active smoker.

Below are a few illustrationc of the reduction and mechanisms against a few of the comon chemical types present in the odor:

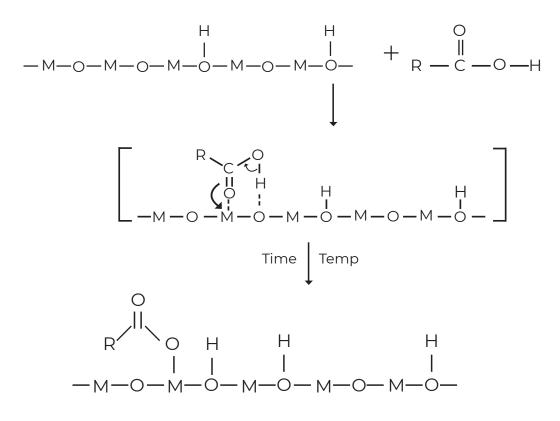
Reduction of CHOH compound in an environmental chamber by EnviroKlenz[®] (ppm vs minutes)



Aldehydes & Ketones: Carbonyl compounds such as formaldehyde and acetaldehyde are adsorbed by means of nucleophilic attack of basic metal oxide ions on carbonyl carbon atoms, concomitant with the nucleophilic attack of carbonyl oxygen atoms binding to Lewis acidic metal ions.



Organic Acids: The metal oxides of EnviroKlenz[®] treat organic acids such as acetic, isovaleric, and propionic acids by acid-base reactions in which the Lewis acid sites of metal ions bind the carboxylate moieties.



PRODUCTS

EnviroKlenz[®] HVAC/Furnace Cartridge

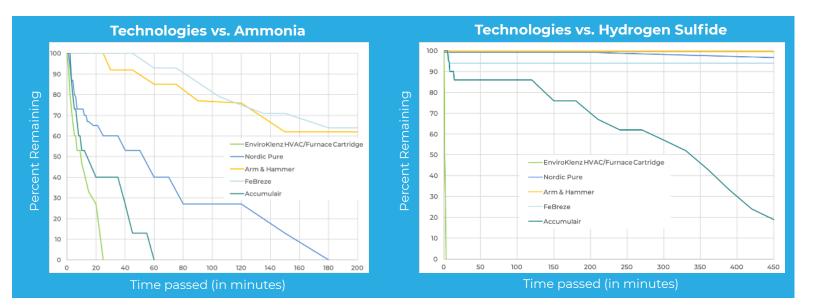
The EnviroKlenz[®] technology is a highly effective "destructive adsorbent" material for chemical containment and neutralization making them not only competitively advantageous but very attractive in multiple chemical sensitive situations where the chemical triggers can come from many different sources. When the EnviroKlenz[®] materials come into contact with the chemical pollutant, the active sites first capture the chemical then initiate



the neutralization process. This type of action is needed for the numerous types of odorous chemicals that possess a variety of different functional groups. The increased surface area, unique physical morphology, high chemical reactivity, and functional porosity, all contribute to the enhanced chemical adsorption and odor neutralizing characteristics.

Specs:

- Custom Sizes available from 1"-4" depth
- MERV 8 Rating
- Changed every 3 months



WHAT MAKES THE ENVIROKLENZ® HVAC/FURNACE CARTRIDGE FILTER DIFFERENT?

The odors from cannabis smoke are the result of many different chemical compounds. In many areas, the legalization of cannabis has some worried about the air quality.

The majority of air handling systems and corresponding filters only focus on particle filtration through the use of pleated air filters; however, these do not address chemical pollutants and odors. To combat this drawback found in traditional air filters, the EnviroKlenz[®] HVAC/ Furnace Cartridge not only does the job of a traditional pleated air filter by capturing hair, pollens, dust, dander, spores, and other common airborne particulates, but the advanced chemical neutralization capabilities of our patented materials give them the added capability to capture and/or neutralize chemical pollutants.

Key Product Attributes:

The technology will be able to prevent, minimize, or counteract exposure to cannabis chemicals through different applications such as:

- EnviroKlenz[®] materials are highly effective against many common chemical irritants, pollutants, and odors.
- EnviroKlenz[®] technology can offer dramatically increased chemical neutralization capability and broader efficacy towards a variety of chemical classes.
- EnviroKlenz[®] technology retains the adsorbed/neutralized chemicals and/or odors without releasing them back into the air.
- EnviroKlenz[®] HVAC/Furnace Cartridge when deployed into existing air handling systems capture and reduce airborne particulates and chemical pollutants in a single product solution.
- EnviroKlenz[®] technology provides superior performance when compared to commercially available counterparts.

Common Cannabis Odors Neutralized with EnviroKlenz:

Sugars Hydrocarbons Alcohols Aldehydes Ketones Acids Fatty acids Esters Lactones Steroids Phenols Flavonoids

EnviroKlenz® Mobile Air System

The EnviroKlenz[®] Mobile Air System uses hospital-grade technology to guarantee the air in your home or office space stays as clean and pure as possible.

It's got certified HEPA filtration, but that's just the baseline. On top of that, we've added our own unique-to-us patented EnviroKlenz[®] Air Cartridge that does, even more, to remove and neutralize VOCs, malodors, and fragrances.

It covers up to ~1000 square feet with a quiet, efficient multi-speed blower that you can adjust to meet your needs. (The low setting is so quiet it's basically silent. And while you can hear the medium and high setting, it's a pleasant hum of non-disruptive background noise. It doesn't sound like a broken lawnmower the way some fans and filters do.)



Better yet, there are no tools required for maintenance, and the filter replacements are always available and easy to purchase from our website.

- · 4-speed controls
- Comes with EnviroKlenz[®] Air Cartridge (VOC Neutralization) & HEPA filter (particulate removal)
- Height: 19: x Width: 15" x Depth: 15"
- Net weight: 38 lbs
- Power: 115V / 60Hz / 1 amp
- CFM Rating: 85, 150, 200 & 250
- · 4 speed blower
- EnviroKlenz[®] Mobile Air System, 250 CFM Type 115V

EnviroKlenz® Mobile Air System w/ UV



The EnviroKlenz[®] Mobile Air System with UV Light combines Advanced EnviroKlenz technology for toxic and noxious chemical and odor removal with HEPA filtration and ultraviolet germicidal radiation (UVC) to remove airborne particulates and allergens and inhibit the growth of captured microorganisms (such as bacteria, mold, and viruses). If you are looking for an air purifier that removes mold, EnviroKlenz[®] UV Model is your best bet.

- 4-speed controls
- Comes with EnviroKlenz® Air Cartridge For VOC neutralization & HEPA filter for particulate removal of up to.3 microns
- · UV light radiates on HEPA filter for mold, bacteria, virus destruction
- Height: 19: x Width: 15" x Depth: 15"
- Net weight: 38 lbs "on wheels"
- Cord length: 5 feet (7.6 M)
- Power: 115V / 60Hz / 1 amp
- · CFM Rating: 85, 150, 200 & 250

COMPARISONS OF VARIOUS AIR PURIFICATION SYSTEMS

SYSTEM	SIZE & Weight	HEPA	POLLUTION TECHNOLOGY*	SUMMARY
EnviroKlenz®	15x15x19, 38 lbs	99.99% > 0.3 µm	Patented Earth Minerals	Effective against particulates, odors, and chemicals pollution without releasing byproducts into the environment.
EnviroKlenz [®] w/ UVC	15x15x22, 45 lbs	99.99% > 0.3 µm	Patented Earth Minerals + Collection Side UVC	Above benefits, plus UVC inactivation of collected microorganisms.
Air Doctor	23x16x8, 18 lbs	99.99% > 0.3 µm	Carbon, Chemically Doped Carbon	Particulate removal, some odor capacity when carbon is used, but off-gassing likely.
HiTech (model 101)	14x15x7	No	UVC	Only UVC benefits, but exposure time is short. No significant particulate removal.
Vernado (PCO200 Silverscreen Air Purifier)	21x15x11, 16 lbs	99.97%	PCO	Particulate removal, some oxidation of chemicals.
Molekule	23x8x8, 18 lbs	No	PECO	Some oxidation of chemicals.
IQ Air (HealthPro Air)	28x15x16, 29 lbs	Yes	Optional Carbon	Particulate removal.
Airpura (R600)	23x15x15, 47 lbs	99.97%	Carbon	Particulate removal, some odor capacity when carbon is used, but off-gassing likely.
Alen (BreatheSmart FIT50)	17x22x10, 16 lbs	99%	lonizer, optional modified HEPA/ filters	Particulate removal, some odor capacity when carbon is used, but off-gassing likely.
Odair	7x12x25, 17 lbs	99.97%	Carbon	Particulate removal, some odor capacity when carbon is used, but off-gassing likely.
Air Shield	13x9x23, 19 lbs	99.97%	Electrostatic, Carbon, UV, PCO, Ion	Uses many different stages of filtration. Relies on carbon for odor mitigation.

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*HEPA – HEPA filters remove particulates 0.3 microns and larger through mechanical (sizebased) filtration. This includes dust, many allergens, pollen, pet dander, etc. HEPA filters do not capture or destroy chemical odors that can pass right through the filter. Typically made from fiberglass.

Activated Carbon – a high surface area material that can absorb some chemicals and odors through physical-absorption (not a chemical process). The absorption of the chemicals and odors, however, is typically reversible and the compounds can off-gas from the carbon media. To make the process destructive, harsh chemicals are sometimes added (these materials are often called doped carbons). This process can yield carbon materials with some neutralization ability, but they often have strong or potent odors of their own. Made from charcoal (and other chemicals for doping purposes).

UV – Ultraviolet light. UV light is a broad spectrum of light in which select ranges are germicidal (UVC). With long enough dosage of UVC light, various organisms can be inactivated or killed. Many air purifiers that use UVC light often have limited dosage or time exposure as the air passes through the UVC light too quickly. UV light alone does nothing to the particulate matter that may pass through it. It has to be combined with the particulate removal process such as filters to have any removal efficacy.

Negative Ion – The use of electrostatically charged plates to produce negatively charged gas ions that particulate matter sticks to in an effect like static electricity. These are often used in mechanical filtration, but some devices emit charged particles to the atmosphere to aggregate smaller particles to get them to fall out of the air.

Ozone – is an oxidizing gas (O3). It can be produced in varying concentrations by devices and generators. Ozone generators produce harmful levels of the gas that can oxidize a variety of chemicals and odors, however, the reaction byproducts are left in the environment. Ozone does not work against particulates, and when used, should only be used in unoccupied spaces by trained professionals.





ENVIROKLENZ® VERSUS TOBACCO SMOKE

There are at least 40 carcinogens among the more than 3,800 chemicals in tobacco smoke. The chemicals in tobacco smoke include nicotine, ammonia, hydrogen cyanide, acetaldehyde, methyl chloride, and pyridine. Many of these toxins are found in higher concentrations in tobacco smoke than in mainstream smoke (the smoke inhaled by smokers). The U.S. Surgeon General and the National Institute of Occupational Safety and Health have found that simply separating smokers and nonsmokers in the workplace or public places does not adequately protect nonsmokers from these chemical hazards.

The residual odor left from tobacco smoke is evidence that these toxic compounds still persist even after the "smoke" has dissipated. These toxic chemicals settle on walls, drapes, furniture, and floors where they still pose the same toxic health threat days or weeks after they were released. Simply masking these odors offers no health benefits to individuals who are exposed to these compounds regularly.

The chemicals listed below are components of tobacco smoke. These chemicals, in particular, are known to cause serious adverse health conditions for individuals who are exposed to them over a prolonged period of time.

Acetaldehyde	Methyl chloride	
Acetone	Nicotine	
Ammonia	Nitric oxide	
Dimethylamine	Nitrogen dioxide	
Hydrogen cyanide	Propionaldehyde	
Methylamine	Pyridine	

The testing indicated that for all compounds a greater than 90% level of reduction in the original compound after treatment with EnviroKlenz[®] components.

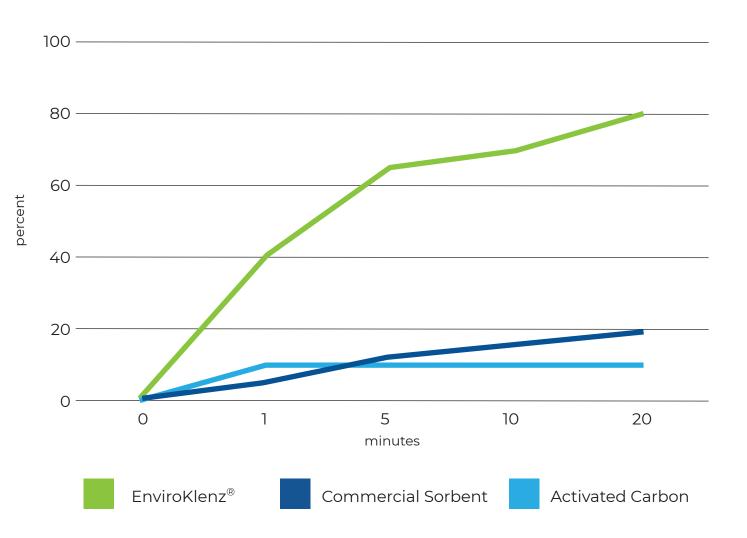
Acetaldehyde

A reaction of acetaldehyde with EnviroKlenz[®] sorbents proceeds through the interaction of the carbonyl group with surface sites followed by the aldehydic hydrogen dissociation leading to a multilayer dissociative adsorption. Such interaction increases the sorption capacity of EnviroKlenz[®] materials, increasing the life of the sorbent.

The figure to the right compares the chemical activity of different forms of EnviroKlenz[®] materials towards destructive adsorption of acetaldehyde. When acetaldehyde is adsorbed from an air stream, rapid adsorption takes place with EnviroKlenz[®] sorbent and almost none with commercial material. Note that activated carbon, a commonly used sorbent, is much less effective, while in just a manner of minutes EnviroKlenz[®] adsorbs over 80% of the chemical from the air stream.



Percent Adsorption vs. Time (minutes)



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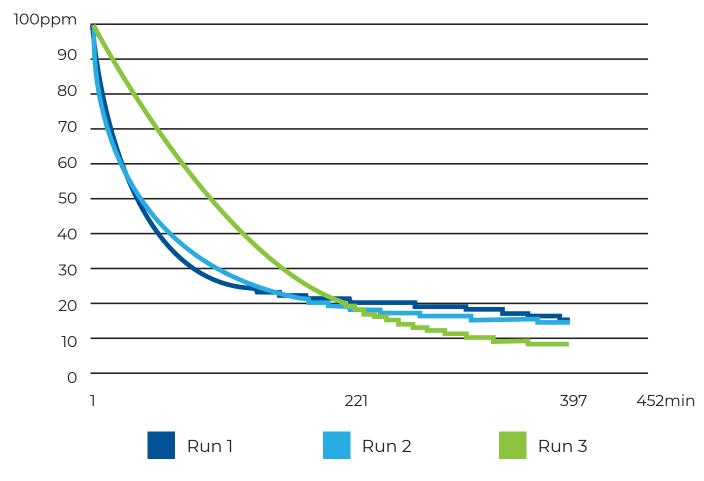
ENVIROKLENZ® VERSUS FORMALDEHYDE

Environmental Chamber

In this test, an acute release of formaldehyde occurred in an environmental chamber. Once the formaldehyde levels equilibrated around 100 ppm, the EnviroKlenz[®] Mobile Air System was turned on to rapidly remove the compound from the chamber air. The test was repeated using the same EnviroKlenz[®] Air Cartridge to show capacity. Once the chemical contaminate is inside the proprietary EnviroKlenz[®] Air Cartridge, an adsorptive neutralize process occurs. This means the chemicals are retained, without being released back into the environment.

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Formaldehyde (ppm) vs Time (min)

Levels this high are not expected to be observed in a living environment, as they are 5 times the immediately dangerous level (IDLH) and 50 times more than the permissible level (PEL) for exposure. They were elevated in the test to account for the smaller size of the environmental chamber and the treatment area of the system (7,500 cubic feet).

EnviroKlenz[®] Mobile Air System has the capacity and capabilities to make a significant impact on formaldehyde impacted living spaces.

HOW ENVIROKLENZ® STACKS UP AGAINST THE COMPETITION

The EnviroKlenz[®] Mobile Air System is your solution to improving your personal environment air quality through an "adsorptive neutralization" process for chemical odors, fragrances, and VOCs, combined with HEPA filtration for particulates and allergens all in one system.

Since the multistage treatment and filtration approach is enhanced with the patented EnviroKlenz[®] technology, it is effective for a broad spectrum of indoor environmental sensitivity triggers.

The small size of the air processor allows it to be portable and easily maneuverable.

EnviroKlenz[®] offers many advantages over the competition including:

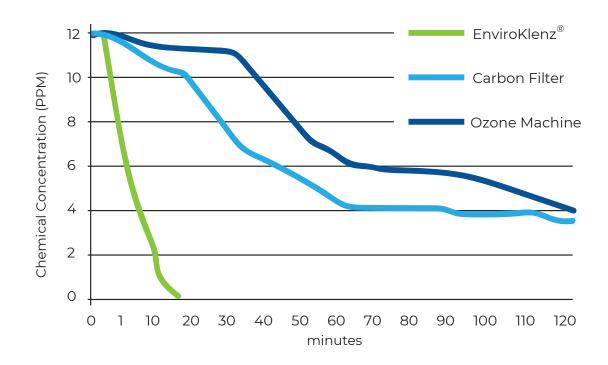
- Combination chemical pollutants (such as VOCs) and particulate matter reduction
- High air exchange and air movement in a compact system

• Advanced adsorptive neutralization technology that does not release chemicals/ byproducts to the environment

• A multi-speed blower offers the quiet and efficient air flow. The low setting allows for near silent operation while still maintaining air flow. Medium to High speeds creates maximum air efficiency at noise levels still suitable for residential and commercial use.

• Simple and easy maintenance.

DEVICE TYPE	PARTICULATE REMOVAL	HEPA FILTRATION	VOC REDUCTION	RELEASED CHEMICAL BYPRODUCTS
EnviroKlenz [®]	YES	YES	YES	NONE
Carbon- based systems air purifiers	Yes	Depends on system	Varies based on chemical formulation and compatibility	Original chemical off gasing
Ionizer	No	Not typically	No	Yes
2-pentanone	No	No	Chemical change via oxidation	Chemical byproducts in air



The graph above illustrates the reduction of a chemical compound (hydrogen sulfide) in an environmental chamber over a period of two hours by an EnviroKlenz[®] System, Carbon Filtration (with HEPA), and an Ozone Machine. The concentration of the chemical is listed in part per million (PPM) and graphed over time in minutes. The carbon filter and ozone machine were not as fast or as effective as EnviroKlenz[®] which was able to reduce H2S to 0 PPM in less than 20 minutes. Additionally, the ozone machine released harmful levels of O3 that took several hours to dissipate. EnviroKlenz is fast and safe.

















INSIDE STANDARD SYSTEM

1. AIR INTAKE

Air is brought in through the 3 top vented sides with 4 different speed settings to choose from, ranging from 85 - 250 CFM.

2. ENVIROKLENZ® AIR CARTRIDGE

The EnviroKlenz[®] Air Cartridge uses patented, natural technology to adsorb and neutralize VOCs and other chemicals, without the use of masking agents or harmful chemicals. In most situations, this cartridge will need replacement after 6 months of use.

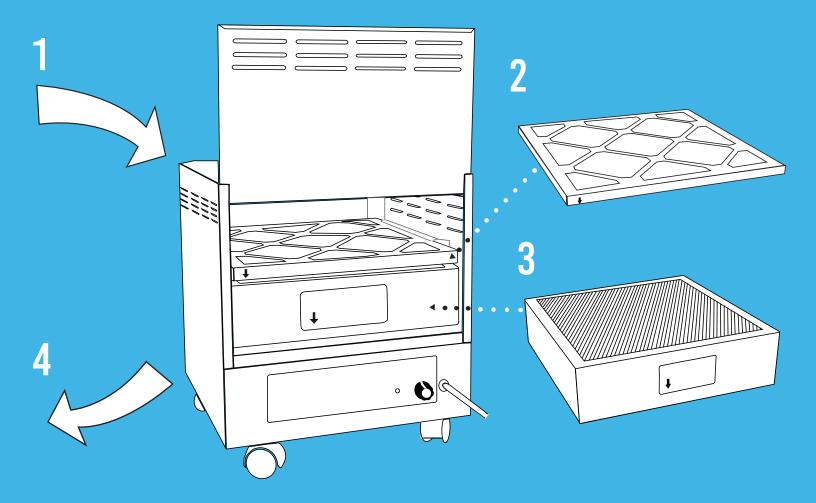
3. HEPA FILTER

HEPA filter captures particulates larger than 0.3 microns at a 99.99% efficiency rate. In most situations, the HEPA filter will need replacement after 2 years of use.

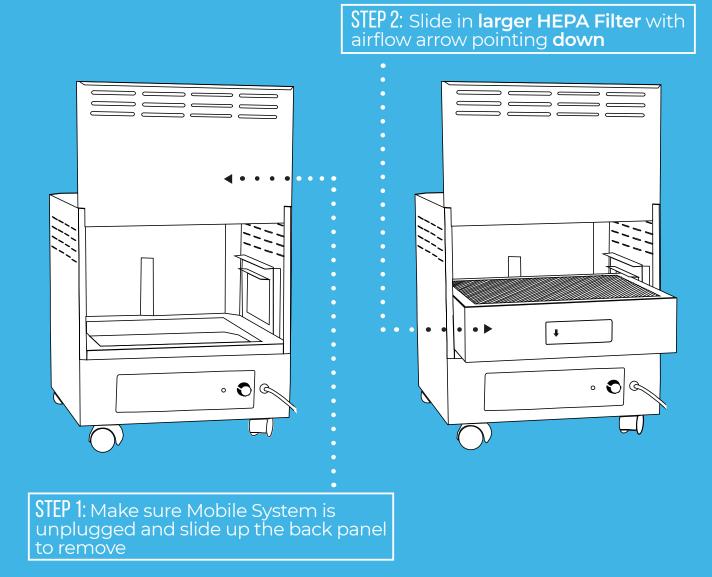
4. CLEAN AIR OUTTAKE

Filtered, clean air is directed out into the environment with the bottom vent. On average, the air will be exchanged 3 - 5 times per hour on highest setting depending on the size of the room.

NOTE: Be sure to use and follow your country's electrical regulations.

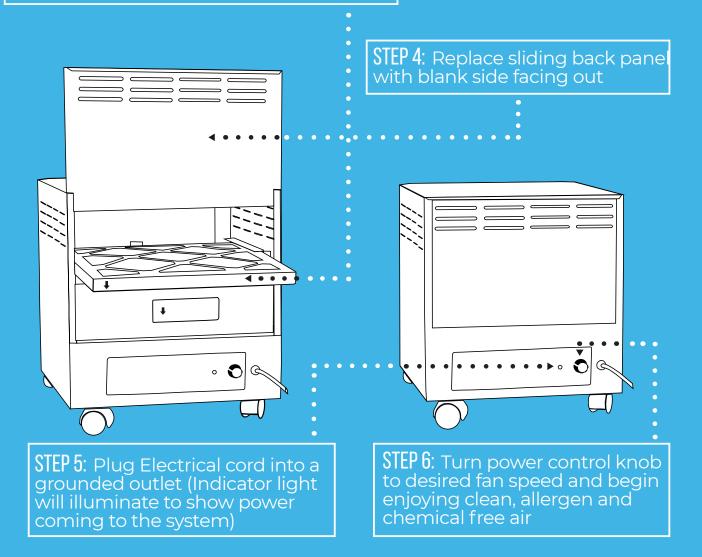


SET-UP & CARTRIDGE REPLACEMENT



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STEP 3: Slide in smaller Enviroklenz[®] Air Cartridge to rest on top of HEPA filter with airflow arrow facing down



INSIDE UV SYSTEM

1. AIR INTAKE

Air is brought in through the 3 top vented sides with 4 different speed settings to choose from, ranging from 85-250 CFM.

2. ENVIROKLENZ® AIR CARTRIDGE

The EnviroKlenz[®] Air Cartridge uses patented natural technology to absorb and neutralize VOCs and other chemicals, without the use of masking agents or harmful chemicals. In most situations, this cartridge will need replacement after 6 months of use.

3. UVC LIGHTS

UVC lamps are located above (and radiating on) the collection side of the HEPA filter. Unlike systems that depend on killing/inactivating the organisms as they pass through the UVC light in a very short period of time, the UVC light is continuously shining on the collected organisms with a very high efficiency of kill.

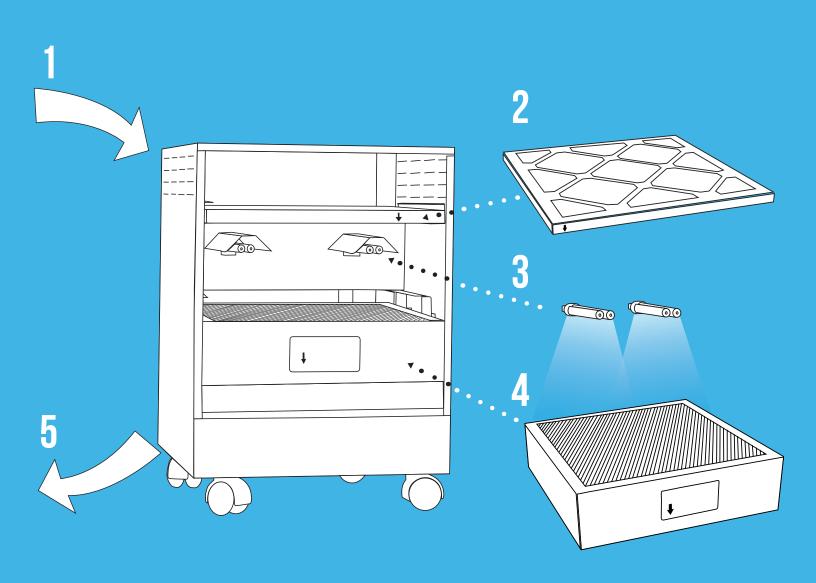
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5. CLEAN AIR OUTTAKE

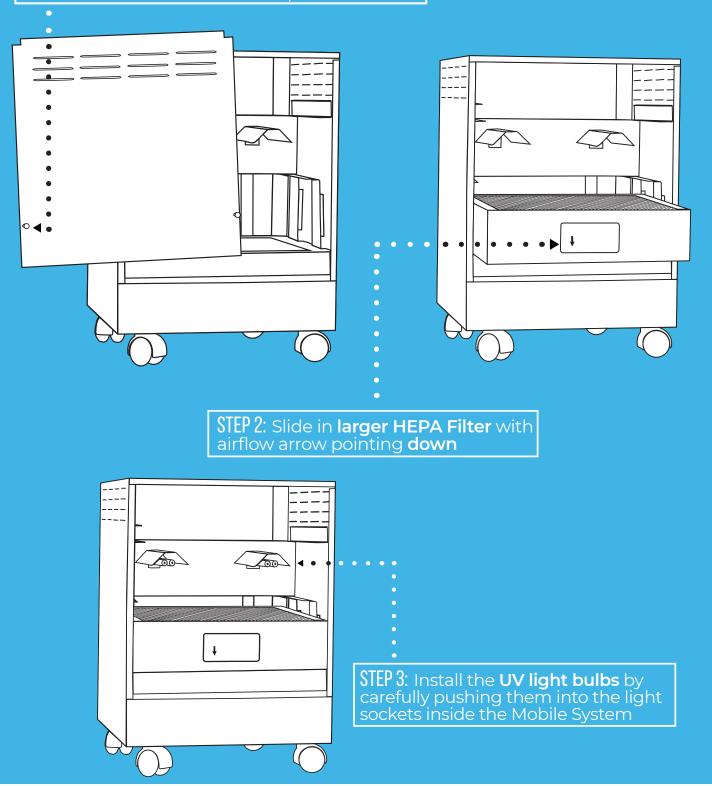
Filtered, clean air is directed out into the environment from the bottom vent. On average, the air will be exchanged 3-5 times per hour on the highest setting depending on the size of the room.

NOTE: Be sure to follow your country's electrical regulations.

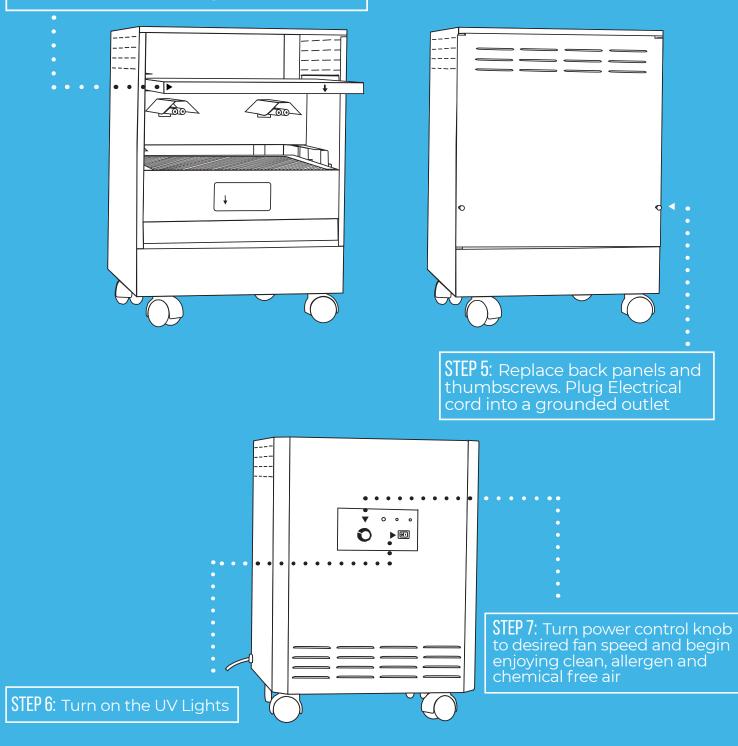


UV SET-UP & ACCESSORY REPLACEMENT

STEP 1: Make sure Mobile System is unplugged and unscrew the two thumbscrews to remove the panel.



STEP 4: Slide in **smaller Enviroklenz® Air Cartridge** above the UV lights on the rails with airflow arrow facing **down**



WARRANTY

Timilon Technology Acquisitions LLC warrants that for a period of one year from the date of purchase, this product will be free from manufacturing defects. Timilon Technology Acquisitions LLC, at its option, will repair or replace the product or any component of the product found to have manufacturing defects during the warranty period. If the product is no longer available, replacement may be made with a similar product of equal or greater value. This warranty is non-transferable and is valid from the date of the original purchase. Proof-of-purchase is required to obtain warranty performance. This warranty does not cover consequential damages and/or damages resulting from negligent use or misuse of the product by failure to store, maintain and/ or use the product in accordance with directions otherwise. In addition, disassembly, repairs, or modification by anyone other than Timilon Technology Acquisitions LLC, acts of God, such as fire, flood, hurricanes, and tornados will not be covered.

Limited Warranty

Timilon provides a 30-Day Return Window and the following limited warranty. This limited warranty extends only to the original purchaser.

Please note that any warranty services or questions must be accompanied by the order number from the transaction through which the warranted product was purchased. The order number serves as your warranty number and must be retained. Timilon will offer no warranty service without this number.

Timilon warrants this product and its parts against defects in materials or workmanship for five years labor and five-year parts from the original ship date. During this period, Timilon will repair or replace defective parts with new or reconditioned parts at Timilon's option, without charge to you.

Shipping fees incurred from returns for under-warranty service will be paid by Timilon.

All original parts (parts installed by Timilon at the original system build) or parts replaced by Timilon or its authorized service center become the property of Timilon. Any after-market additions or modifications will not be warranted and the customer is responsible for the payment, at current rates, for any service or repair outside the scope of this limited warranty.

Timilon makes no other warranty, either express or implied, including but not limited to implied warranties of merchantability, fitness for a particular purpose, or conformity to any representation or description, with respect to this other than as set forth below. Timilon makes no warranty or representation, either express or implied, with respect to any other manufacturer's product or documentation, its quality, performance, merchantability, fitness for a particular purpose, or conformity to any representation or description.

The warranty and remedies set forth below are exclusive and in lieu of all others, oral or written, expressed or implied. No reseller, agent or employee is authorized to make any modification, extension or addition to this warranty.

Procedures for Obtaining Warranty Service

RMA (Returning Merchandise Authorization) Policy:

If repairs are required, the customer must obtain an RMA number and provide proof of purchase. RMA and services are rendered by Timilon only. All returned parts must have an RMA number written clearly on the outside of the package along with a letter detailing the problems and a copy of the original proof of purchase. No COD packages will be accepted. No package will be accepted without an RMA number written on the outside of the package. RMA numbers are only valid for 7 days from the date of issue.

CONTACT

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