



# PURIFIER MAN

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## Safe, Proven Effective, And Certified.

Purifier Man Technology puts back into indoor air the same therapeutic molecules that make our outdoor air safe. These molecules actively neutralize pathogens and volatile organic compounds (VOCs) as they enter the indoor space. Our tech provides a layer of protection that reduces airborne and surface pathogens quickly and effectively.

## Purifier Man Technology Has Been Extensively Tested.

- Purifier Man Technology has been extensively tested for both its safety and efficacy against airborne and surface contaminants in occupied spaces.
- We are continually studying how to optimize the use of our technology as an effective layer of protection to reduce community-acquired infections in occupied areas.
- The Medical Guardian is currently the subject of a two-year double-blind clinical trial at the Cleveland Clinic to measure the impact of Purifier Man Technology on reducing surgical site infections.
- Purifier Man Tech has demonstrated material real-time reductions in pathogens in various studies, including in Health Canada ICU units and Texas hospital operating rooms where our technology was utilized in conjunction with installed ventilation and filtration systems.
- Purifier Man Tech has been safely deployed in several schools across the country. Among the successful school test data, the data from a day school in Dallas, TX, shows a material reduction in airborne and surface contaminants and a 70% improvement in overall air quality. This school was able to safely return to full-time in-person learning in 2020 with Purifier Man Tech as an effective, complementary solution in addition to ventilation, distancing, and mask-wearing.

## Purifier Man Technology Is Not A Passive Technology.

- Purifier Man Tech is not air filtration.
- Filtration is a passive technology that depends upon air circulation and filter efficiency to trap pathogens.
- Filtration's effectiveness is highly dependent upon particle size, MERV filter rating, and air changes per hour (ACPH).



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- Using higher rated MERV filters can reduce ACPH and ventilation rates which are dependent on ACPH, while increasing energy usage and maintenance costs.
- Air changes per hour are simply inadequate at remediating the interior spread of pathogens at close contact, and standard industry testing protocols use static environments rather than real-world environments where pathogens are continuously introduced into the environment from the occupants.
- Clean air delivery rate (CADR) is a metric that is applied to passive trapping devices in static testing environments. That being said, CADR does not measure pathogens. CADR measures smoke, dust, and pollen. CADR inadequately reflects the exponential benefits of utilizing an active technology that neutralizes pathogens.

## **Purifier Man Tech Is Scientifically Proven.**

- Purifier Man Tech is validated by the FDA and safe for people, pets, and the environment.
- This technology has been tested in independent third-party labs following FDA protocols and is proven to materially reduce SARS-CoV-2, the virus that causes COVID-19, in the air within 3 minutes.

## **Purifier Man Tech Has A Device (Medical Guardian) That Is FDA Cleared.**

- In addition to multiple independent third-party studies at university and FDA-compliant commercial laboratories, the Medical Guardian, which uses the same Purifier Man Technology found in all Purifier Man Technology products, was cleared by the FDA as a Class II Medical Device in 2020.
- The multi-year process essential for FDA clearance tested Purifier Man Tech to ensure that it was safe and effective. Purifier Man Technology is effective against six clinically relevant pathogens and creates no harmful byproducts or ozone.

## **Purifier Man Technology Is CARB Certified.**

- Purifier Man Tech has over a dozen devices that are CARB-certified, which means they are safe and meet California's strict ozone emissions concentration limit of 50ppb.



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## Purifier Man Technology Is UL Certified.

These devices have also been tested to UL safety standards, confirming the quality, safety, and performance of the devices, and ensuring the products meet regulatory requirements for safe and trustworthy products.

## Purifier Man Tech Is A Unique Purification Solution.

To help individuals differentiate between active and passive technologies, Purifier Man compared six known air purification technologies to ours:

### **Purifier Man Tech Is Not an Air Filter Such As HEPA Or MERV 13.**

- These filters trap some but not all airborne particles when air is first brought in from the outside or recirculated.
- They cannot effectively reduce the spread of pathogens that are continuously released in occupied rooms through aerosols or droplets. Because they are passive systems, they must wait for airborne pathogens to come to them before being partially filtered. Even then, pathogens are not neutralized, they are merely trapped in the filter.

### **Purifier Man Tech Is Not an Ionizer.**

- Ionizers use electricity to produce ions that impart an electrical charge to nearby particles.
- The majority of these ions cause particles to stick together and fall out of the air rather than eliminate the pathogens.
- The large number of charged particles produced by ionizers have been linked to harmful health outcomes.

### **Purifier Man Tech Is Not A Ventilation Solution.**

- The HVAC industry is pushing for more fresh air and better filtration as a way to improve indoor air quality (IAQ).
- Filtration alone is a slow and marginally effective way to address IAQ concerns around human introduced pathogens.
- Changes to filtration, ACPH, and ventilation may require the costly replacement or modification of both older HVAC systems and modern highly engineered HVAC systems.



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- Increasing air flow through denser filters will cause a material increase in the carbon footprint of any facility using these new systems and filters.

## **Purifier Man Tech Is Not UVGI Light.**

- UV light is utilized in indoor spaces in two formats both of which are limited.
- The robot style UV light is extremely powerful but also labor intensive, only treats what is in direct line of sight, and can only be used in unoccupied rooms as it is harmful for your eyesight and skin. Wall mounted UV lights that claim continuous disinfection must be shielded so that the UV light is not visible to occupants.
- With the shielded approach, it becomes a passive technology that waits for pathogens to pass by it.
- Studies show that pathogens must be exposed to the UV light for a minimum of 12 seconds to be inactivated. Such exposure is unlikely in moving indoor air.

## **Purifier Man Technology Is Not PCO Technology.**

- Most PCO type air purifiers are based on early versions of the technology.
- They typically have reduced reaction rates and limited effectiveness, rendering them not much better than any other passive filtration technology.
- Early generation PCO type air cleaners can create ozone and dangerous VOCs, making them unsafe to use in indoor environments.

## **Purifier Man Tech Is Not A Chemical Surface Disinfectant.**

- Surface disinfectants are chemical agents that kill or eliminate microorganisms on surfaces. Due to infrequent or incorrect application, they do not necessarily kill all microorganisms, especially those that are highly resistant. They also tend to involve toxic chemicals and they do not protect against pathogens newly re-introduced after application.

## **Purifier Man Technology Is A Versatile Solution To Address Any Facility**

- Last but not least, Purifier Man offers a variety of portable and induct solutions along with professional design and installation services ensuring that spaces treated with Purifier Man Technology are as safe as scientifically possible.



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- Purifier Man's professional design services take into account the cubic feet of indoor air and the density of occupants in the space to determine the ideal solution while our quotes are for delivered product including professional installation on a \$ per square foot basis.
- Induct solutions are installed within the HVAC ductwork and do not affect the operation or performance of the HVAC system. Purifier Man's induct solutions are the most cost effective for most applications while portable products can provide additional protection for more densely populated areas within any space and areas where visible product is desired to inspire confidence with both customers and employees.