

INTRODUCTION

The COVID-19 pandemic has brought about an increased focus on indoor air quality. Whether it be schools, hospitals or buildings – cleaner-healthier air has become a global topic – quickly making the pandemic an “infodemic”. As you begin your search for technologies that fight COVID-19, asking the right questions is imperative to choosing the best solution.

This Quick Guide provides an overview of different types of air purification, as well a comparative analysis of various technologies that are available on the market today.

UNDERSTANDING AIR PURIFICATION

There are two types of air purification systems – **Active** and **Passive**. It is important to understand the capabilities of each system, in order to achieve your indoor air quality goals.

Passive Air Purification systems rely on contaminants travelling to the source (Filters, UV lights, etc.) in order to absorb, filter and destroy pollutants. The nature of their passive state prevents these systems from being able to treat contaminated airborne droplets or viruses and bacteria that live on hard surfaces.

Active Air Purification systems release ions into the air space that pressurize the room. These active ions proactively treat and purify every cubic inch of occupied space, as well as hard surfaces.

TYPES OF AIR PURIFICATION

ACTIVE VS. PASSIVE

ACTIVE

- Releases hydroperoxide ions into the airspace
- Proactively treats every cubic inch of air-conditioned space
- Neutralizes viruses and bacteria found in the air and on hard surfaces

AVAILABLE TECHNOLOGIES

Hydroperoxide Ion Technology

Bi-Polar Ionization

Plasma Ionization

Needlepoint Ionization

PASSIVE

- Pollutants must travel to a physical source for treatment
- System can only treat contaminants that reach the source
- Limited protection against airborne and/or surface viruses and bacteria

AVAILABLE TECHNOLOGIES

UVC

HEPA Filter

Chemical Filter

Electronic Air Filter

CHOOSING THE RIGHT TECHNOLOGY

Indoor air quality experts agree that **Active Air Purification** is the optimal way to combat COVID-19 and mitigate the spread of contaminated droplets found in the air and on hard surfaces.

The chart below is a quick comparison between Active and Passive air purification systems. As you can see systems using Hydroperoxide Ion technology provide the most comprehensive benefits, with a line-up of features and benefits that significantly outweigh other **Active Air Purification** systems.

IAQ Systems - Quick Guide Comparison									
FEATURES & BENEFITS	Active Air Purification					Passive Air Purification			
	Hydroperoxide Ion Technology	Bi-Polar Ionization	Plasma Ionization	Needpoint Ionization	Photocatalytic Oxidation	UV	HEPA Filtration	Chemical Filter	Electronic Air Filter
Number of Air Purification Effects	4-6	2	2	1	3	1	1	1	1
Treats Viruses and Bacteria on Surfaces >99%	✓*								
Treats Airborne Particulates at the Source >99%	✓*	✓*	✓*		*				
Effective Against COVID-19 (Lab Tested & Verified) >99.9%	✓*	✓*	✓*		✓*	✓	*	*	
Actively Destroys Contaminants in the Occupied Space	✓	✓*	✓*		✓				
Reduces Odours > 80%	✓	✓	✓		✓*		*	✓	
Reduces Surface Mould >90%	✓*	*	*		*				
Eliminates VOCs >99%	✓*							✓	
Provides an Active Sneeze Shield of 3 Feet	✓*								
Low Pressure Drop (Does Not Inhibit Air Flow)	✓	✓	✓	✓	✓*	✓*			✓*
Maintenance Requirements	Every One to Four Years *	Every Two Years*	Every Two Years*	Yearly*	Yearly*	Yearly	Quarterly	Quarterly	Quarterly
Warranty (Typical)	2-7 Years	1-3 Years*	1-3 Years*	1 Year*	2 Years*	1 Year*	1-3 Years*	N/A	1 Year
Does Not Require Re-engineering of HVAC Systems	✓	✓	✓	✓	✓*	✓*	*		*
Reduces Energy Costs by Reducing Outdoor Air Exchange	✓	✓	✓		✓*	✓*			
Contaminants are not required to pass through the duct system to be treated or rendered in-active	✓	✓	✓	✓	*				
Does Not Produce Harmful Chemicals or By-products	✓*	✓*	✓*	✓	*	✓*	✓	*	*
Does Not Produce Ozone	✓*	✓*	✓*	✓*	**	**	✓	✓	*
* Depends on application and manufacturer									
** UVV (Vacuum UV) UV-A and UV-B typically produce Ozone. Properly designed UVC typically does not produce Ozone									
A Green box indicates a positive attribute while a Tan box indicates that it does not meet the requirement or is unlikely to meet the requirement									
Disclaimer: This chart is for informational purposes only, accuracy of the information provided is subject to change. Not all products in the market have been studied in production of this document									

CHOOSING THE RIGHT PRODUCT

COVID-19 has created an unprecedented demand for **Active Air Purification** and particularly Hydroperoxide Ion technology. Unfortunately, increased demand and lack of tech-education has led to unfounded claims that create market confusion and uncertainty.

It is important to note that not all products using Hydroperoxide Ion technology are created equal. The efficacy, performance, cost and reliability of each product can vary widely. Here are some of the key qualifying questions we recommend considering when performing due-diligence:

- ✓ How many active effects does the product produce?
- ✓ Does it treat the air and hard surfaces?
- ✓ Is it laboratory proven to neutralize COVID-19?
 - Who was the lab?
 - When was the test done?
 - Was it tested on Sars 2 (not a surrogate)?
- ✓ Does it generate ozone?
- ✓ Does it offer a comprehensive warranty?
- ✓ What are the ongoing costs and maintenance?
- ✓ Is the product Health Canada approved?
- ✓ Has the product been installed and tested in other Canadian schools?



Cleaner Air for
SCHOOLS

CONCLUSION

Following an extensive review of various air purification technologies, it is our belief that the REME-HALO LED provides the most effective and reliable indoor air quality solution for Canadian schools.

This Active Air Purification system proactively treats every cubic inch of air-conditioned space, reducing airborne and surface contaminants through bi-polar ionization and revolutionary, patent-pending, REME-LED technology. It is both mercury-free and zero ozone compliant.

REME-LED technology is laboratory tested and proven to neutralize COVID-19 by 99.9%, both in the air and on hard surfaces. The manufacturer of this technology has a proven track record of over 4-million installations in over 60 countries.

Click here to view a video of the lab results summary for COVID-19.

Cleaner Air for SCHOOLS

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