Reviveaire Introduces First Non-Thermal Plasma-Based HVAC Air Disinfection and Filtration Product

Aireshield combines airborne pathogen disinfection, particulate agglomeration/collection and cooling coil biofilm prevention within residential and commercial HVAC system airstreams.

Wednesday, Feb. 5, 2025

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[Reviveaire](https://reviveaire.com) LLC, Kenilworth, N.J., a leading provider of HVAC and IAQ filtration equipment, has introduced [Aireshield](https://reviveaire.com/aireshield/), a revolutionary air filtration method that combines airborne pathogen disinfection, particulate agglomeration/collection and cooling coil biofilm prevention within residential and commercial HVAC system airstreams. Aireshield is the HVAC industry’s first non-thermal plasma-based airborne contaminant filtration method in North and South America. Aireshield offers negligible HVAC system static pressure drops and is ozone free.

The patent-pending Aireshield resembles a one-inch-thick traditional HVAC media filter frame. It easily slides into an HVAC system’s filter channel and is hard wired into the control circuit. The Aireshield creates a 5,500V plasmic field that damages airborne viral and bacterial contaminants’ genetic material as they pass through in the HVAC airstream. The plasmic field inactivates, neutralizes and prevents replication beyond 99% as proven by third party tests for SARS, influenza and Staphylococcus Albus and other biological contaminants. Non-thermal plasma-based air filtration is recommended by [ASHRAE Standard 241](https://www.ashrae.org/technical-resources/bookstore/ashrae-standard-241-control-of-infectious-aerosols).

The Aireshield generates >1 ppb of ozone during the neutralization process, according to ASHRAE 241 chamber testing. Aireshield also surpasses California Air Resources Board (CARB) air cleaning device ozone compliance and UL2998 “Zero Ozone Emissions Validation.”

Besides disinfection, the Aireshield also provides sub-micron particle agglomeration. Sub-micron particle agglomeration can improve MERV 8 and MERV 13 media filters to MERV 13 and MERV 16 performances with maximum static pressure drops of 0.22-w.g. at 500 FPM. The high voltage field inactivates biological contaminants but also applies negative and positive charges to all particulates. The charged particulates then electrically attach to each other to initiate the agglomeration process. As they enlarge, all particulates eventually become entrapped into media filters regardless of the MERV rating.

An additional benefit is Aireshield’s prevention of mold, slime, mildew, micro-toxins and other biological growths on cooling coils, which improves cooling performance and indoor air quality (IAQ). Clean coils perform more efficiently. When combined with Aireshield improved MERV 8 media filters, which offer lower static pressure and motor power reductions, building owners can expect a payback of less than 2 years (based on New York City electric rates) through energy savings without sacrificing IAQ performance.

The Aireshield comes in five sizes (24x24-inch, 25x20-inch, 20x20-inch, 25x16-inch, 24x12-inch) with custom residential and commercial sizes available upon request.

The Aireshield fits all HVAC system configurations, requires no replacement parts, and installs within 15 minutes. It can either supplement a one-inch-wide MERV 8 filter in the typical two-inch-wide HVAC system filter channel or supplant the media filter itself. It can also supplement or supplant MERV 13 filters.

Other Aireshield benefits include:

* Third-party tested and certified to ETL, UL and CSA 22.2 standards;
* [Installation videos](https://youtu.be/tH7yD1wL6as?si=MHDlOfJ3LiyVsKkh) as well as optional [wiring walkthroughs](https://youtu.be/MgPQco9Kq2E?si=g5tCvBZNDJ1PVd8h) commonly encountered are available on the [Reviveaire YouTube channel](https://www.youtube.com/@ReviveAire);
* Can operate as a standalone filtration system, or supplement UV, bipolar ionization, activated carbon or all traditional media filter methodologies;
* Less expensive than a properly specified UV lamp system;
* doesn’t degrade in performance or require periodic replacement like other filtration methods;
* Requires once or twice annual cleanings;
* 3-year warranty.

Non-thermal plasma technology has been used for many years in the food manufacturing industry to sterilize canning and packaging processes. One of its first appearances in HVAC was at the Beijing 2022 Winter Olympics when the International Olympic Committee mandated airborne disinfection for airport terminal common areas and mass transit trains to prevent disease spread. Versus ultraviolet (UV) lamps, non-thermal plasma-based filtration requires smaller footprints inside HVAC systems and doesn’t require periodical replacement due to degradation.

Future non-thermal plasma based variations planned for a 2nd Qtr. 2025 include an app to connect with building management systems to monitor/control filter operation and maintenance. Another planned addition for 2025 is a standalone non-thermal plasma-based unit for rooms under 2,800 cu. ft.

Aireshield residential and commercial applications are sold through HVAC wholesale distributors and plan/spec manufacturer’s representatives, respectively. For more information on Reviveaire LLC, visit [www.reviveaire.com](https://reviveaire.com), email: info@reviveaire.com or call (908) 987-7089.

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**About: Reviveaire LLC**

Reviveaire LLC serves as the exclusive North American and South American supplier of Aireshield, a state-of-the-art air disinfection system designed to protect indoor spaces. Aireshield delivers a safe and healthy atmosphere by neutralizing airborne pathogens and improving particulate collection. Our commitment to innovative Indoor Air Quality (IAQ) technology is unwavering. Our product line targets a mission of healthy buildings for occupants to breathe better, cleaner air. For more information email: info@reviveaire.com visit [www.reviveaire.com](http://www.reviveaire.com) or call (908) 987-7089.

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Aireshield Website

<https://reviveaire.com/aireshield/>

Reviveaire Website

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Reviveaire Youtube Channel link:  
<https://youtu.be/MgPQco9Kq2E?si=g5tCvBZNDJ1PVd8h>

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