

Boost HVAC Filtration Performance

The most cost-effective way to enhance airborne particle capture—without higher pressure drop, increased energy consumption or costly HVAC upgrades.



NanoCharge BOOST is a filtration enhancement technology that improves the performance of compatible synthetic media HVAC filters, enabling more effective capture of ultrafine particulate matter, wildfire smoke, viruses, bacteria, mold spores and allergens—while maintaining airflow and HVAC system efficiency.

Rethinking High-Performance Filtration

Building owners are under increasing pressure to improve indoor air quality while reducing energy consumption, controlling operating costs and creating more resilient facilities. Whether responding to wildfire smoke, infectious disease preparedness, tenant expectations or evolving standards such as ASHRAE Standard 241, healthier indoor environments have become a business imperative. Historically, meeting these goals has required upgrading to higher-efficiency MERV filters—often increasing pressure drop, fan energy, operating costs and, in some cases, requiring HVAC system modifications. NanoCharge BOOST changes that equation.

NanoCharge BOOST offers a smarter path forward

Unlike traditional approaches that rely solely on higher-efficiency filtration, NanoCharge BOOST enhances the performance of compatible synthetic media HVAC filters, enabling more effective capture of ultrafine particulate matter, wildfire smoke, viruses, bacteria, mold spores and allergens—without the increased energy consumption or system impacts typically associated with higher-efficiency filtration.

Designed for both new construction and retrofit applications, NanoCharge BOOST provides one of the most cost-effective ways to improve indoor air quality while maintaining HVAC airflow and efficiency, minimizing energy impacts and creating higher-performing, more resilient buildings.

WITH NanoCharge BOOST



Same filter, dramatically higher capture efficiency



No pressure drop increase



No fan upgrade required



Installs in minutes via magnets



Maintaining status quo in operating costs whilst boosting IAQ

vs.

WITHOUT NanoCharge BOOST



Higher MERV= higher pressure drop



Increased fan energy cost



Possible system redesign and HVAC system retrofit complexity & cost



Reduced system efficiency with potential airflow and comfort issues



Resulting in significantly higher operating costs

How NanoCharge BOOST Works

The Science Behind Better Filtration Performance

Installed upstream of HVAC filters, NanoCharge BOOST continuously generates a high concentration of negative ions. Airborne particles become charged, increasing electrostatic attraction to filter fibers for more effective capture. Charged particles may also cluster into larger masses, further improving capture by the existing filter media.

3-Step Process

Advanced Bipolar Ion Technology for Superior Filtration Performance

1. IONIZATION

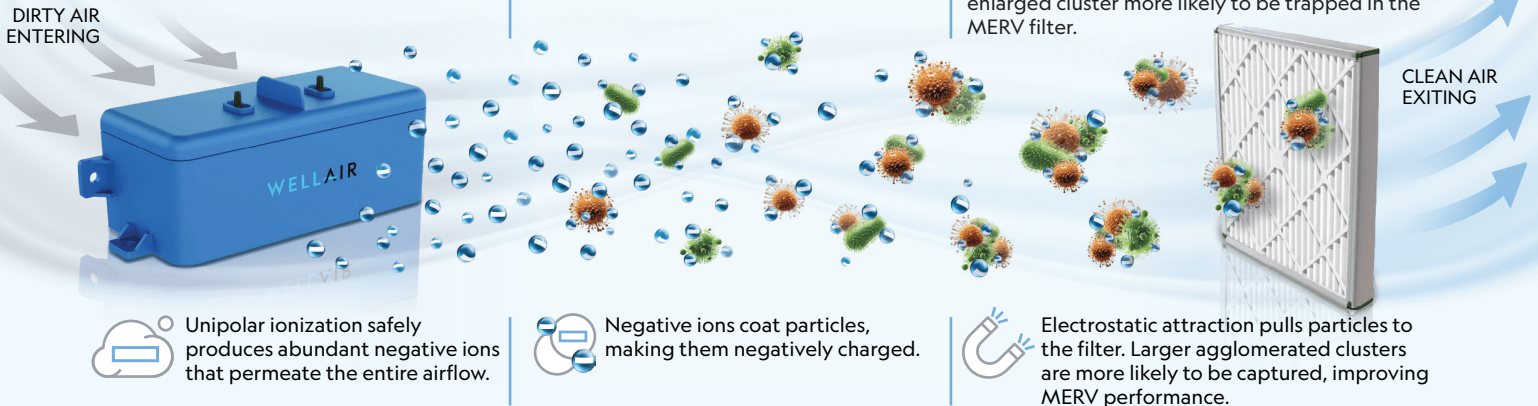
Air passes the NanoCharge BOOST dual needles, tiny negative ions flood the air stream.

2. CHARGING

Airborne pathogens, wildfire smoke, and dust particles get coated in a negative charge.

3. ATTRACTION & FILTRATION

These negatively charged particles are attracted to the filter via electrostatic attraction with some also clustering together via agglomeration with the enlarged cluster more likely to be trapped in the MERV filter.



Up to 2.4× Improved Particle Removal

Particle Size Range (µm)	Example of Particulates within the Micron Size Range (Note: PM sub-types are positioned in the size category where smallest size of that particulate type occurs)	Performance Point (PP) Improvement
0.0 – 0.1 µm	Ultrafine Particles, Exotoxins	81% ¹
0.1 – 0.3 µm	Rhinovirus, Norovirus, Influenza A, SARS-CoV-2, Secondary Organic Aerosols (SOA), Dustmite Debris & Fecal Pellets, Mold Mycotoxins, Soot / Black Carbon (nodules)	142% ¹
0.3 – 0.5 µm	Measles, Chickenpox, Mumps, Sub Pollen Particles (SPP), Smoke (wildfire, wood), Sea Salt Aerosols	131% ¹
0.55 – 0.7 µm	MRSA, C-Diff, C-Coli, Legionella, Pesticide Dust (fine powders), Soot / Black Carbon (aggregates)	39% ²
0.7 – 5.5 µm	Pet Dander, Pollen (common forms), Dust (large particles), Mold Spores (common form), Microplastics	5% - 28% ²

¹ NanoCharge BOOST + MERV 13 filter
² NanoCharge BOOST + MERV 11 filter

More Than Better Filtration. Better Building Performance

Improving filtration performance is only the beginning. NanoCharge BOOST helps organizations create healthier, more resilient buildings while supporting energy efficiency, operational performance and indoor air quality objectives.

Whether incorporated into a new HVAC design or an existing building, NanoCharge BOOST delivers measurable value that extends well beyond filtration.

Building Outcomes That Matter



Health

Capture more ultrafine particulate matter, wildfire smoke and airborne pathogens.



Productivity

Create cleaner indoor environments that support occupant comfort and productivity.



Energy Savings

Enhance filtration without increasing pressure drop or fan energy.



Asset Protection

Reduce particulate loading to help protect HVAC equipment and building assets.



ESG & Sustainability

Support healthier buildings while reducing energy demand.



Resilient Buildings

Help prepare buildings for wildfire smoke and infectious aerosol events.

Supporting IAQ Standards & Building Certifications

Standard / Framework	How NanoCharge BOOST Supports IAQ Objectives
ASHRAE 62.1	Supports IAQ Procedure strategies through improved airborne particle capture
ASHRAE 241	Supports infectious aerosol risk reduction strategies
ASHRAE 44	Supports wildfire smoke resilience strategies
WELL®	Two points for alignment with ASHRAE 241
LEED®	Delivering resilient spaces via ASHRAE 241 and 44
Fitwel®	Emergency preparedness plan - ASHRAE 241 or 44

NOTE: Contribution toward standards, certifications and credits depends on overall building design, HVAC system configuration and project-specific requirements. NanoCharge BOOST is one component of a comprehensive indoor air quality strategy.

Start Building Healthier, More Resilient Buildings.

Discover how NanoCharge BOOST can help improve indoor air quality while minimizing energy impacts and supporting healthier, more resilient buildings.



**Consult a WellAir
Indoor Air Quality Expert**