

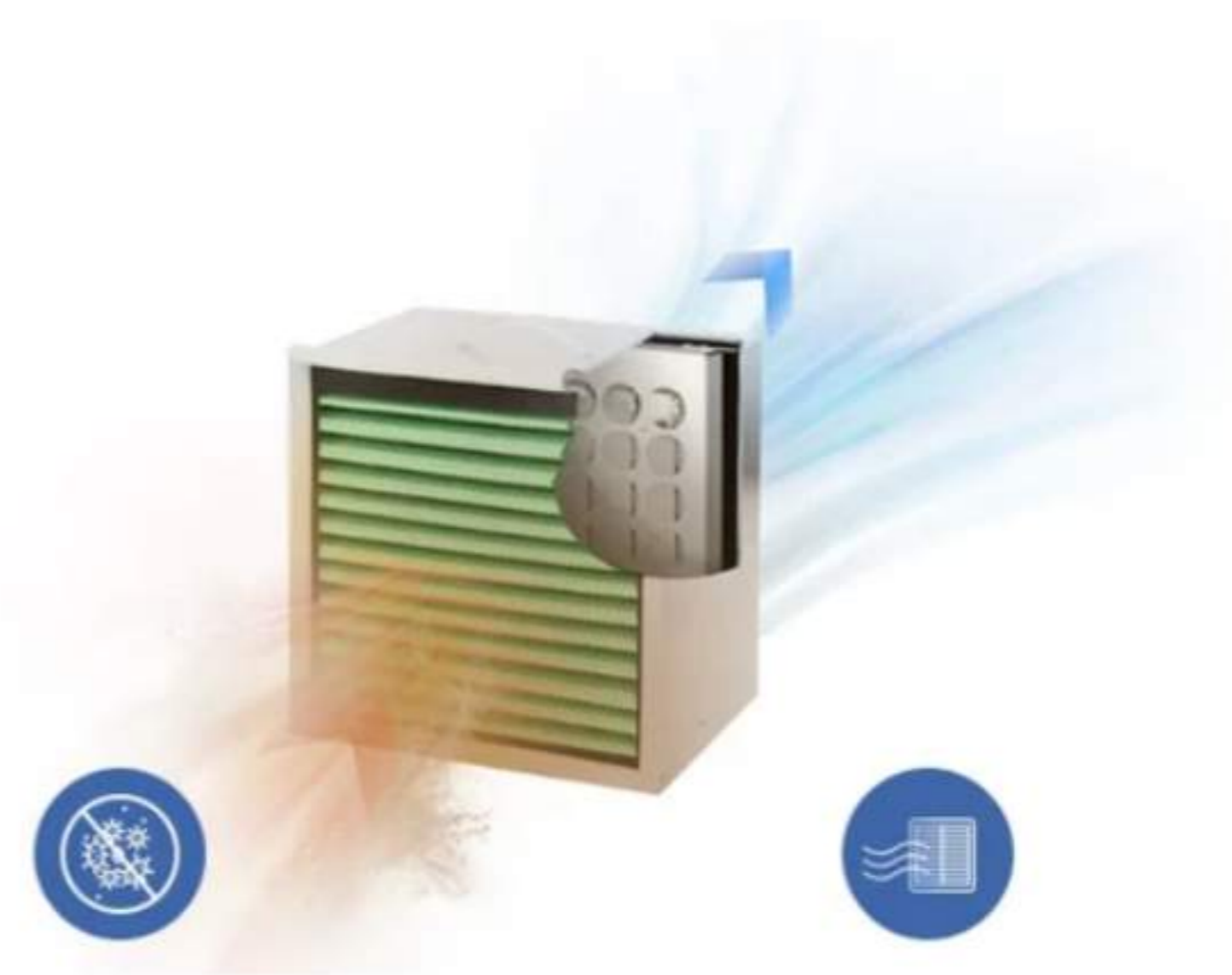
# PATENTED TECHNOLOGY

## HealthyAir® systems

couple advanced eHEPA® technology with proven Enhanced Carbon Catalytic Filtration to filter contaminated air in a multi-stage process that collects potentially harmful ultra-fine airborne particles and gaseous pollutants.

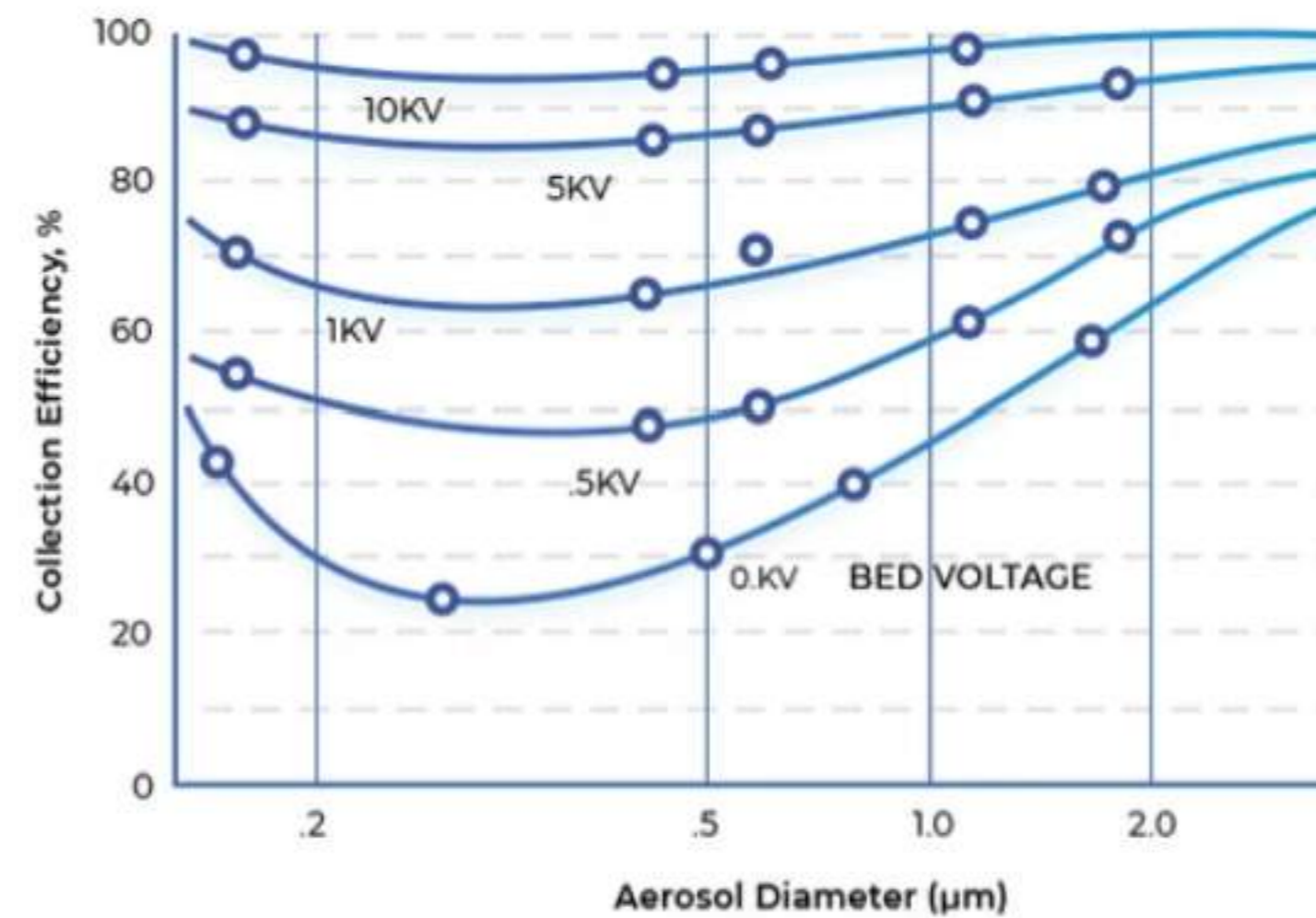
Innovatively integrating a high energy field with traditional HEPA filtration, eHEPA® technology successfully overcomes limitations and inefficiencies associated with standard filters. The result is a truly effective air purification process that collects particles at 0.3 micro, and smaller, with high efficiency and at low pressure drop.

Furthermore, by applying a high energy field that generates active species that permeate through the filter media, eHEPA® collects and deactivates airborne contaminants.



## Laboratory data - EFB Collection of DOP Aerosols

Massachusetts Institute of Technology Dept. of Electrical Engineering



# eHEPA® AND HEPA COMPARED

	eHEPA	Standard HEPA
<b>Particle Capture</b>		
Efficient at 0.3 microns	✓	✗
<b>Captured Pollutants</b>		
Dust	✓	✓
Pollens	✓	✓
Pet Dander	✓	✓
Dust Mite By-Products	✓	✗
<b>Micro Organisms</b>		
Viruses	✓	✗
Bacteria	✓	✗
Mold and Fungi spores	✓	✗
Airborne germs	✓	✗
<p>With the use of Enhanced Carbon Catalytic Filtration following the eHEPA® energization process, capture efficiency is further increased and oxidation of gaseous compounds, such as VOCs, eliminates the presence of these toxic gases and the odor associated with them.</p>		

## KNOW THE DIFFERENCE

	Standard HEPA
<p><b>Low Air Flow Restriction</b></p> <p>Less dense than other HEPA filters, the eHEPA® main filter is initially 85% efficient at 0.3 micron particle size. However, with the application of the systems high energy field, filtration efficiency is effectively raised to 99% at 0.3 micron particle size.</p> <p>Because of its lower media density, the eHEPA® filter does not restrict airflow like traditional HEPA filters.</p> <p>By enabling higher airflow, the overall eHEPA® filtration process is more efficient.</p> <p>An additional benefit of this design feature is that the lower pressure drop enables the machine to operate more quietly, as the motor and blower do not have to work as hard to push the air through the filter media.</p>	<p><b>High Air Flow Restriction</b></p> <p>True or Absolute HEPA is a very dense paper media with filter efficiency of 99.97% at .3 micron. This is great for efficiency however it can result in poor air cleaner performance, due to reduced airflow. While a filter can be highly efficient if little air is moved through it the purification process is actually ineffective.</p> <p>Many manufacturers make the claim of silent HEPA filtration, yet the physics behind mechanical filtration do not support this assertion. Given the density of the media, a powerful motor and blower would be required to truly push air through the filter, which would naturally result in a system that produces noise.</p> <p>In most cases manufacturers are pushing little air through their machines, on low or medium speed, and claiming their products operate silently or quietly. This may be true, yet in these cases it is also true that these systems are not effectively cleaning air either. On high speed HEPA systems are providing clean air at 99.97% efficiency at .3 microns, but they make considerable noise.</p>
<p><b>Higher Filter Loading Capacity</b></p> <p>The lower relative density of the eHEPA® filter media results in it having 4x greater loading capacity than similarly sized conventional HEPA filters.</p> <p>With true filter monitoring by pressure indication of when the filter has reached its maximum loading capacity is accurate.</p> <p>The eHEPA® main filter incorporates Spun Sealed Technology, ensuring that every filter is 100% sealed and that the entire systems functions to deliver optimal and reliable performance.</p>	<p><b>Lower Filter Loading Capacity</b></p> <p>As a result of the high density characteristic, conventional HEPA filter media tend to load with particulate rather quickly.</p> <p>Once the loading capacity has been reached, these filters are ineffective and need to be changed.</p> <p>Because most HEPA systems operate with timers, they do not accurately indicate when the filters actually need to be changed.</p>
<p><b>Captures and Deactivates Microorganisms</b></p> <p>Developed with a focus on capturing and deactivating microorganisms, eHEPA® solves a problem that is common in conventional HEPA systems.</p> <p>While other systems effectively capture microorganisms they do not deactivate them, thereby enabling these species to reproduce and proliferate while contained in the system.</p> <p>By applying 10kV of energy to the filter media, eHEPA® technology creates an uninhabitable environment for microorganisms and reduces the probability of reproduction.</p>	<p><b>Fails to Prevent Reproduction of Microorganisms</b></p> <p>When conventional HEPA filters become coated they tend to create a breeding ground for microorganisms.</p> <p>As moisture builds up in the filter, bacteria, viruses, and fungi often remain alive and reproduce.</p> <p>As a result, if filters are not changed in a timely manner, microorganisms may breed and re-enter the environment.</p> <p>HealthyAir® Product Specifications</p>