



Console management system & personal desk environment

Effectiveness of MyZone® System's HEPA Filter in Reducing Particle Count

In this study, we apply Air Innovations ME200 MyZone® desk console management system to address particulate reduction. The MyZone system has the (optional) integrated HEPA filter for both heating and cooling modes along with a prefilter. See **Figure 1** for details of the unit.

This study evaluates the effectiveness of the MyZone system when applied to a standard office environment. The objective is to establish a baseline particle count in the office area close to where the MyZone is applied and to compare this baseline data to data taken exiting the unit's ducts and at a central desk location. The instrument being utilized for this study is a PCE-PQC 12EU/US handheld particle counter. This device has a large dynamic range measuring concentration of particles or aerosols from $0.3\mu\text{m}$ to $25.0\mu\text{m}$. The upper fan used for cooling was set to high, while the lower fan was also set to high with the heating option turned off.

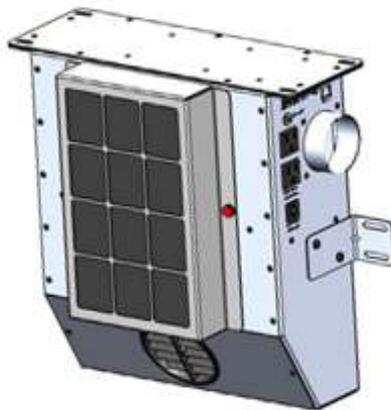


Figure 1

The upper chamber is the cool side, while the lower chamber utilizes an adjustable heating element up to $140^{\circ}\text{F}/60^{\circ}\text{C}$ discharge air temperature. These chambers are isolated from each other, with the upper chamber providing air above the desk and the lower chamber providing air under the desk.





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Figure 2 shows the results of the particle counter tests at $0.3\mu\text{m}$ per ft^3 . The tests show a 92% to 95% reduction in particles measured at the outlet vent of each duct when compared to the inlet air of the system. In summary, a MyZone system installed with the optional HEPA filter will reduce particles local to the desk where the system is integrated.

% Reduction Values Are Calculated from Inlet Air Data

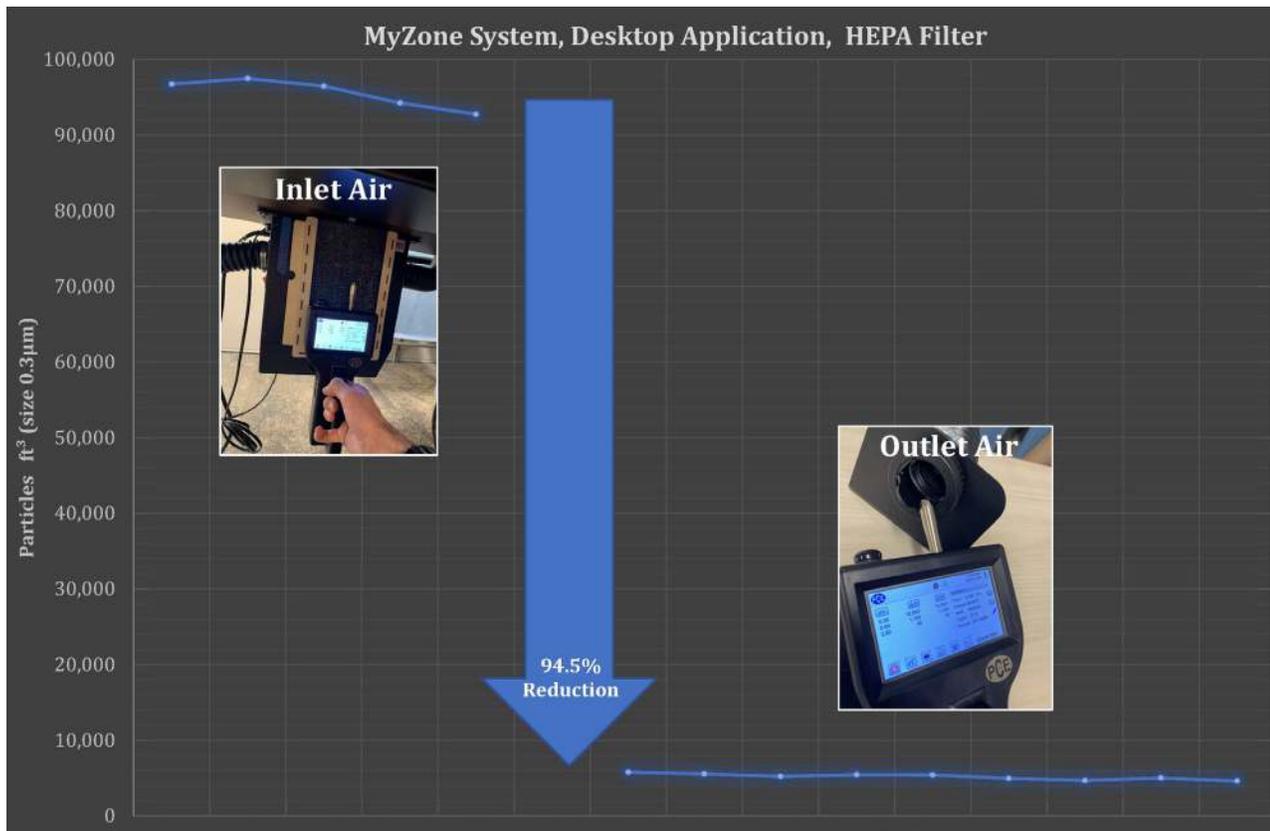


Figure 2