Air Conveying and Filtration

Experts in Air Handling Systems since 1932
Most Americans spend 90% of their time indoors and the US EPA states that indoor air pollution is among the TOP-5 environmental risks to public health, with potential issues stemming from the presence of several contaminants including dust.

**Settling affect of dust particle**

Dust < 1 micron tend to stays air born

<table>
<thead>
<tr>
<th>Particle Size</th>
<th>Settling Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>150 µm</td>
<td>4.0 seconds</td>
</tr>
<tr>
<td>20 µm</td>
<td>3.7 minutes</td>
</tr>
<tr>
<td>5 µm</td>
<td>1.0 hours</td>
</tr>
<tr>
<td>0.5 µm</td>
<td>4.1 days</td>
</tr>
<tr>
<td>0.1µm</td>
<td>3.5 months</td>
</tr>
</tbody>
</table>

Assumes 10 foot hi, density 1.25 g/cm³

0.3-microns is known as the "Most Penetrating Particle Size (MPPS)" for HEPA filter media. Efficiency is typically greater than 99.97% against larger or smaller particle sizes. Smaller particles often lack sufficient mass to penetrate the media.

MERV 13 filter recommended to filter 70% of .3 microns while minimize filter changes (HEPA is 99.97%)
Safe
- Cleans breathing air
- Reduces explosive dust from air & settling
- Quiet 67 db fan uses light to know fan is running

Convenient
- Not regulated by NFPA 652 (< 5k cfm, ambient air)
- No ducting required
- Ease of side-loading filters
- The EC fan system automatically adjusts to maintain consistent air changes for entire life of the filter
- LED light indicates filter change is needed
- No tools or fasteners required change filters

Economical
- Energy efficient 5-star filters for optimal performance
- No special disposal required of filters (local recycling facilities)
- Reduce HVAC costs
- EC motor and smart fan system with low operating costs
- Improves absenteeism, morale, and productivity

Revolutionary Clean Air Solution
AIRSCREEN Micro®

Configurable to your specific needs

Applications:
Corrugated and other manufacturing facilities where DUST, welding smoke, oil mist, chemicals and/or fumes are present.

Commonly installed where direct source capture may be difficult.
Customizable - 3-part modules for various specific needs

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**Horizontal – 2000 CFM & 4000 CFM**
2k cfm unit is 28” W x 70” L x 30” H (with F+M)
4k cfm unit is 52” W x 70” L x 30” H (with F+M)
Air recirculation of filtered air significantly reduces heat and cooling required with makeup air systems.

An energy-efficient fan motor and 5-star ECI air filters ensure the lowest total cost of ownership.

Calculating the number of units desired based on Factors to consider:
Use calculator to model optimal units required.
AIR QUALITY MATTERS – Now more

Interim Guidance for Businesses and Employers Responding to Coronavirus Disease 2019 (COVID-19), May 2020

Plan, Prepare and Respond to Coronavirus Disease 2019

Summary of Changes to the Guidance:

Below are changes as of May 6, 2020

- Updated strategies and recommendations for employers responding to COVID-19, including those seeking to resume normal or phased business operations:
  - Conducting daily health checks
  - Conducting a hazard assessment of the workplace
  - Encouraging employees to wear cloth face coverings in the workplace, if appropriate
  - Implementing policies and practices for social distancing in the workplace
  - Improving the building ventilation system

OSHA/HHS Guidance

ASHRAE’s position is:

Transmission of SARS-CoV-2 through the air is sufficiently likely that airborne exposure to the virus should be controlled. Changes to building operations, including the operation of heating, ventilating, and air-conditioning systems, can reduce airborne exposures.

Neither WHO nor CDC rule out the possibility of aerosol transmission under some circumstances and both recommend the use of engineering controls in some cases and cannot explain all incidents of community spread of COVID-19. ASHRAE’s position that engineering controls to reduce airborne concentrations of viral particles or droplets are warranted to mitigate this risk is not in conflict with WHO and CDC’s positions.
• Sneezing, coughing or even breathing can expel droplet nuclei of < 5 microns which are easy to inhale and suspended in aerosol form for several hours.

• Tulane National Research Center on Infectious Disease Aerobiology “saw very little deterioration in the infectiousness of the covid-19 aerosols after 16 hours”

• ASHRAE studies show MERV 13 filters or higher, clean the air and mitigate transmission of infectious aerosols from viruses and contaminated droplets – such as Covid-19 / Coronavirus

American Society of Heating, Refrigerating and Air-Conditioning Engineers
ASM500 cfm HEPA Portable (Classroom, Offices, Hospital rooms etc.)

The ASM500-VHU can screen up to 500 cfm through a 99.99% HEPA filter as an ambient in-room recirculation air purifier or exhaust HEPA filtered air in negatively pressurized isolation areas.

- Quiet motor operates on standard outlet and includes a multi-speed control switch to maintain desired airflow.
- The backward curved fan delivers up to 12 air changes per hour (ACH) in 2500 ft³ as an in-room HEPA air purifier
- Available with caster wheels for portability or Mounting kit provided for wall or ceiling-mount configurations

12.5" wide by 14" deep; 40" tall
Weighs 50 lbs including filters
AIRSCREEN μicro®

Thank you & Take Care

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www.OBPairsystems.com