

# CALAB PRODUCT CATALOG

AERO SHIELD / AERO VENT

World's first filter that enables Vent-Purifier System



# About us

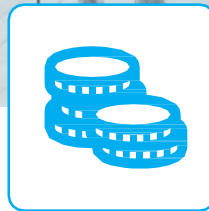
CALAB stands for Clean Air Laboratory and was founded to develop products that provide clean air in a safer and more affordable way.

We note that the air that anyone could drink freely is no longer a public good but a consumer good due to pollution. We're trying to make sure that many people can breathe the air with relief through a more effective and economical solution.



## Vision

Provides everyone with a chance to breathe clean air



## Mission

Develop products with excellent performance at affordable prices



## Core Value

Equality, Transparency, Trust, Curiosity, Ability to Act

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①

## Increased issues concerning dusts

Interest increased in the occurrence and risk of fine particulate matters around East Asia

②

## Increased importance of ventilation

Demand increased for ventilation due to legislation and awareness-raising of citizens

③

## Develop consumer-friendly product

Avoid products inconvenient to use or maintain, and develop products from the perspective of consumers

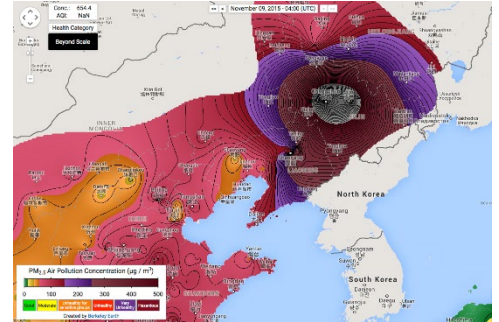
④

## Guarantee of the rights to clean air

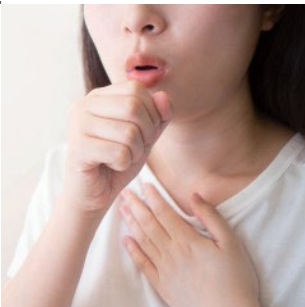
Ensure the right to breathe clean air at an affordable price

# The process **polluted air** comes to us

Hazardous substances including heavy metals, fumes, bugs, and fine dust from Asian countries are **entering home through vents**, installed on the ceiling of houses, **threatening your health.**



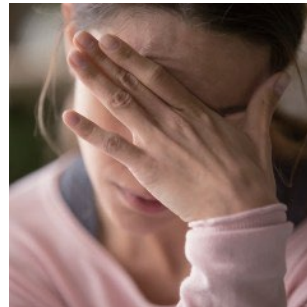
Are you suffering from an **befogged headache/fatigue?**



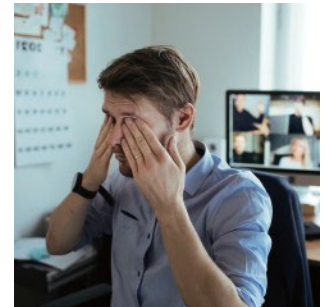
**Nasal congestion / sneezing** at the change of seasons



Autoimmune diseases like **Atopy / Psoriasis / asthma**



**Chronic headache** that occurs staying indoors



**Feeling of fatigue** not refreshed even after waking up

“

**We breathe 'the indoor air' every day.**

Do you aware 'that air' contains a lot of harmful substances?

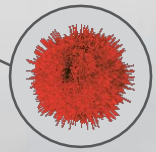
# Do we have a **ventilation system** in our house?

Most newly built apartments and offices have externally connected vents on their ceilings.

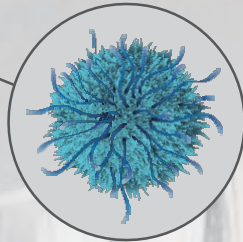
However, when the existing ventilation system is used, **contaminated external air enters the house directly.**



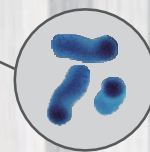
PM 2.5



Viruses



Bugs/hazards



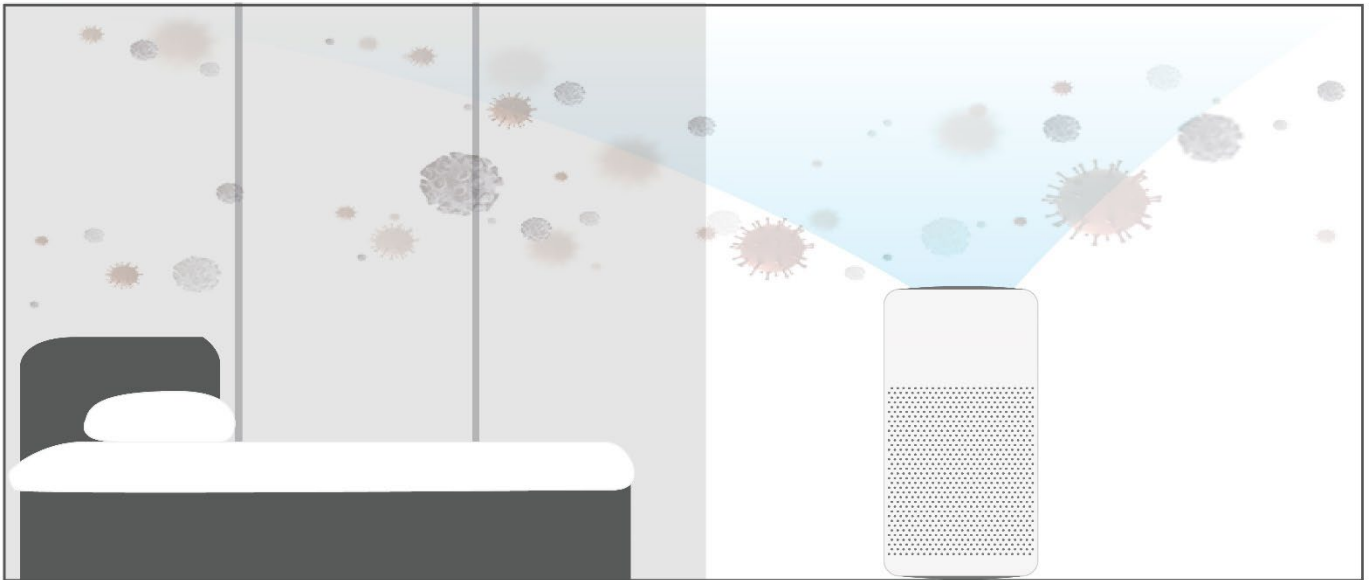


## Are you worried if you have to use **an air purifier** in each room?

With one air purifier, only dust in a space of 30~50m<sup>2</sup> can be removed. In other words, it is difficult to remove the dust in the rest of the space such as children's rooms and bedrooms.

In a way, it might be effective to use an air purifier in each room.

But **considering costs and space problems, it is also difficult.**



## You trust **the air purifier** and **don't ventilate**?

Air purifiers are effective in removing fine dust and fine particulate matters, but **never get rid of any harmful substances** from human breath and constructional material such as CO<sub>2</sub> and Radon.

**WHO emphasizes the key to remove these substances is the ventilation!**

# How could it be dangerous for us to use air purifiers without ventilation?



- As in the experiment above, air purifiers are effective in removing fine dust, but it is difficult or impossible to remove Carbon dioxide, Radon, VOCs, and Formaldehyde.

Thus, **ventilation and purification must come together after all.**

- The importance of ventilation reported in the media**

New York Times

## The White House emphasizes the importance of indoor air quality as the pandemic moves into a new phase.

The Environmental Protection Agency recently issued expert guidance to building managers, contractors and business owners, with two pages of recommendations that codify the best practices on ventilation, air filtration and air disinfection of the last two years.

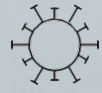
# Ventilation Filter made by Korean No. 1 research team!

It is a filter developed after ceaseless study by Korean great scholars who have been devoted to developing technologies and products in the air cleaning field for decades to realize a society where everyone breathes clean air.

Enjoy more pleasant and clean air with a vent filter that removes not only fine dust but also 'Carbon dioxide' and 'VOC', which never be removed by air purifier.







PM 2.5



Pollen



Virus



Bacteria



\*These images are intended to help you understand the installation-type of Aero Vent and may differ from the actual product.

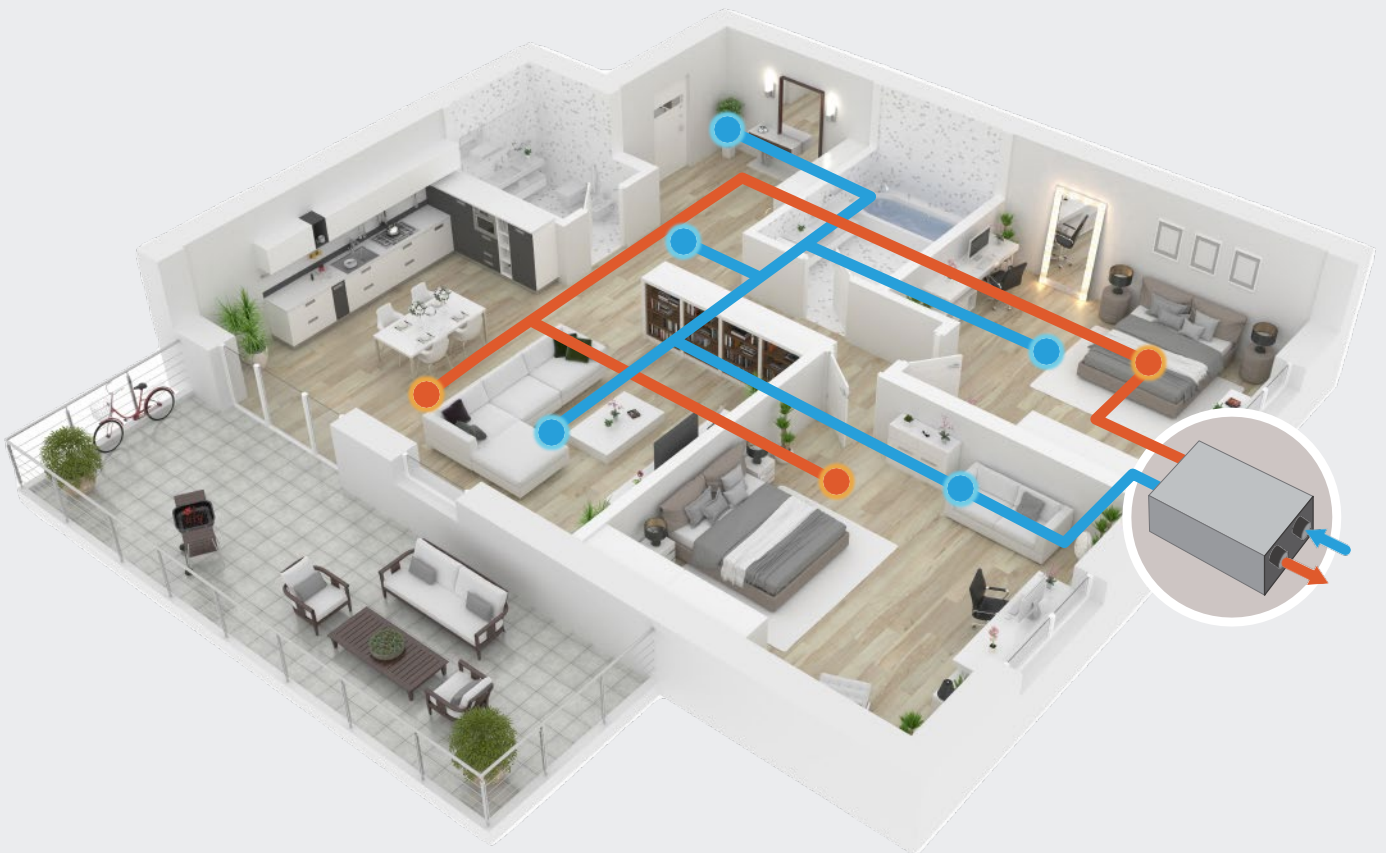
The moment installed in the vent,  
the whole house/office will be directly  
converted **into a clean room!**

The nation's No. 1 air purifier filter researchers designed.

Optimized for indoor spaces to quickly remove harmful substances,  
maintain maximum ventilation, and keep living spaces clean at all times.

This is a new type of vent filter that combines ventilation and purification.

- Outlet Vent (Air Supply Vent)  
(Installed point)
- Inlet Vent

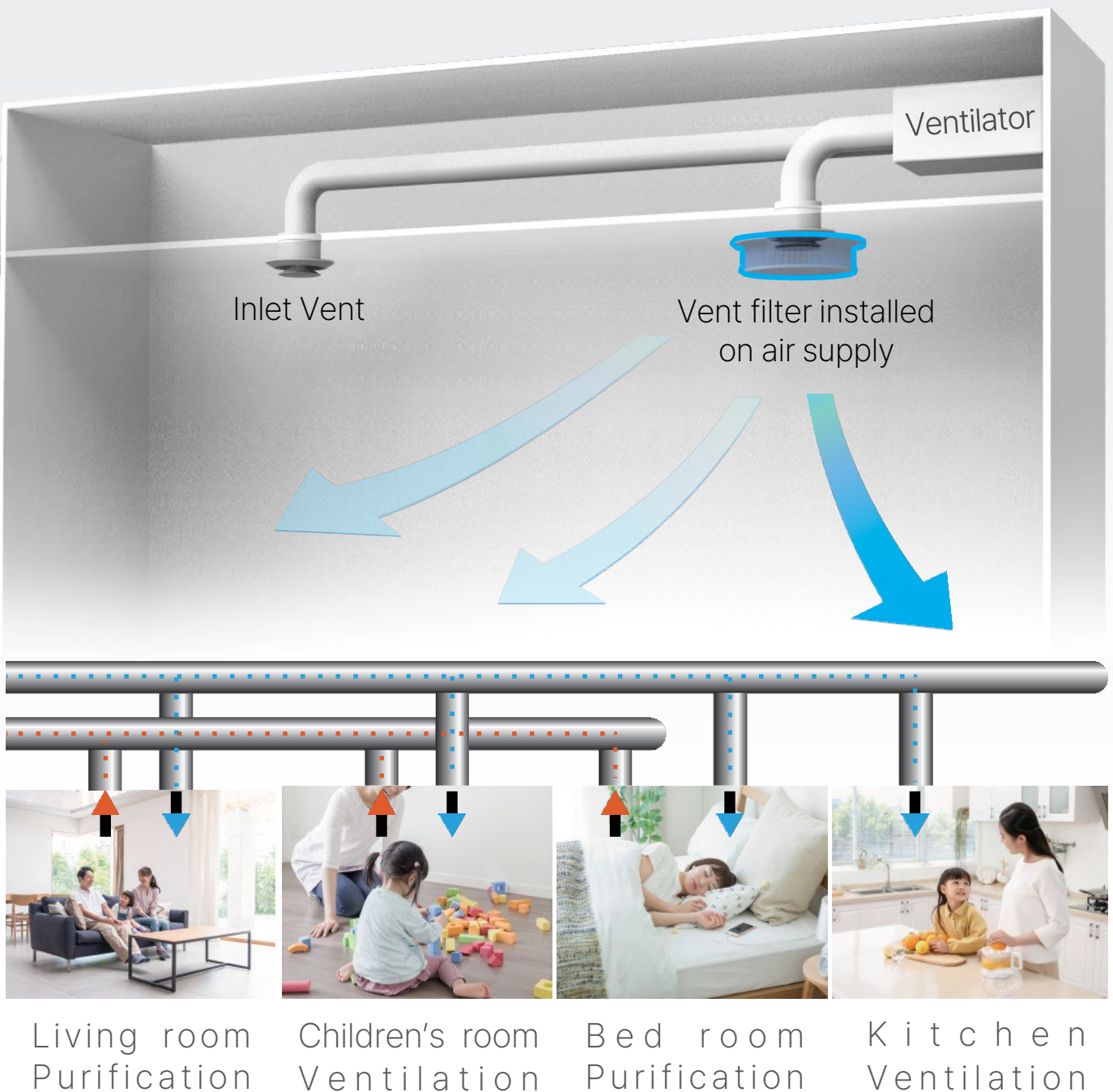


\* In general, the one located near the window is the outlet vent.  
Depending on the structure of the house, the number of vent may vary.

## Ventilate and purify at the same time!

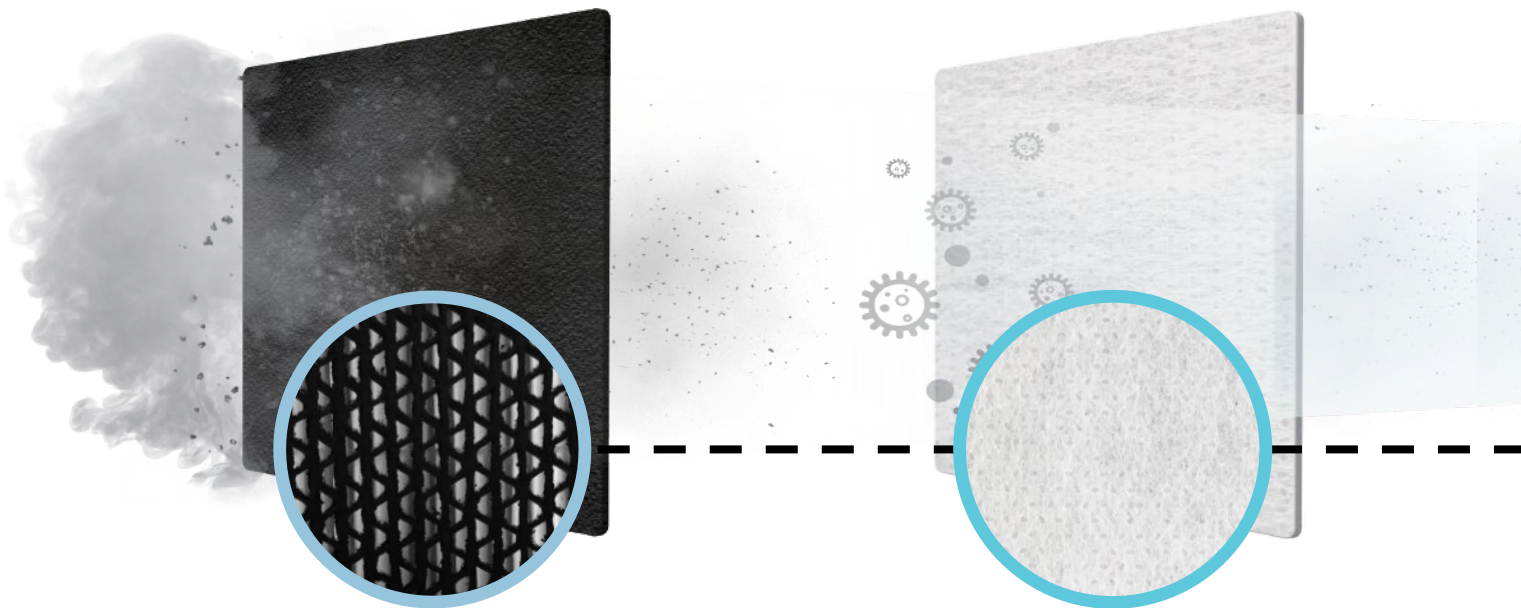
Aero Shield/Aero Vent, a new concept of ventilation-purification compound solution that can be easily installed in any vent.

It completely removes not only fine particulate matter, but bacteria and viruses to manage indoor air pleasantly.





With unique filter technology  
Quickly removes harmful substances  
**4-step perfect filter**



## Activated carbon fiber filter

Remove odor from outside  
Remove harmful gases

## 3D multi-layer filter

Remove large dust  
Remove pollen

**1** **Active carbon material**  
optimized for adsorption

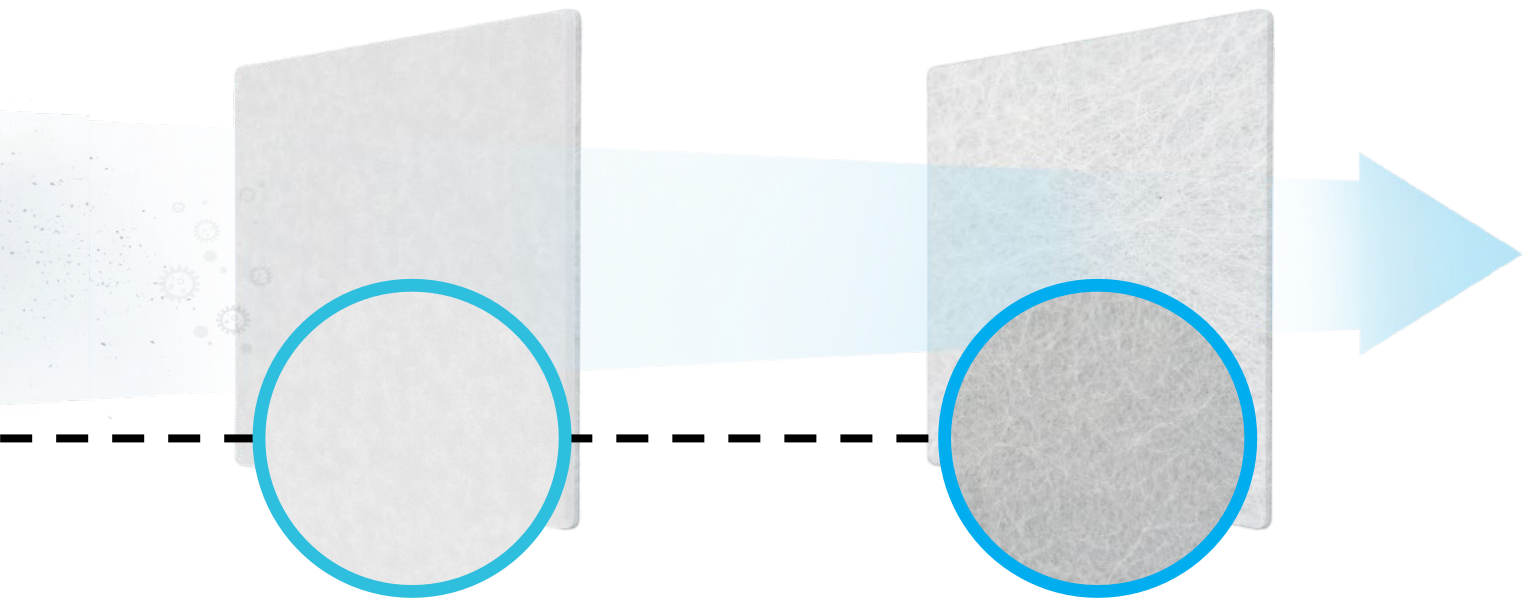
**2** **Colgate structure**  
minimizes air resistance

**3** **Long-term durability!\***  
with photocatalytic technology  
\* Applied to Aero Vent S

**1** **Multi-layer structure**  
by diameter

**2** **Removing large dust & pollen**  
extend the life of nano fiber filter





## Electret filter

Remove fine particulate matter

## Nano fiber filter

Remove virus and bacteria

**1** **With electrostatic force**  
remove fine particulate matter

**2** **Minimize air resistance** and  
maximize **dust collection efficiency**

**1** **Up to 0.1  $\mu\text{m}$**   
eliminate viruses

**2** **Hydrophobic polymer-based**  
**water-resistant** with up to **4x longer** life  
without reducing efficiency by moisture

# Unrivaled inherent technology

Product with unrivaled performance based on Air Sim Technology™ & Aero Hybrid Filter™, our core technologies and patents.

## Existing purifier **B company**



Remove fine dust ○

Remove CO2 ✘  
(only can with ventilation)

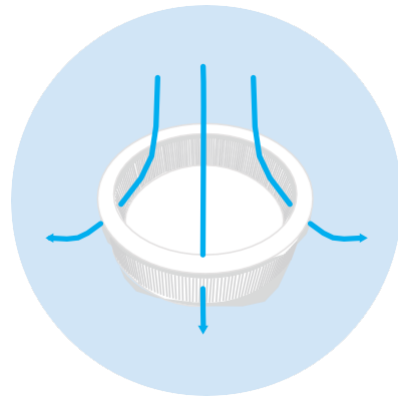
Remove bioaerosol ✘  
(they don't stick to filter)

Remove cause of SHS\* ✘  
(unable to remove gaseous substances)

Long term usage ✘  
(avg. 3 months usage)

\* Sick House Syndrome

## Ceiling type purifier **Vent Filter**



Remove fine dust ○

Remove CO2 ○  
(only can with ventilation)

Remove bioaerosol ○  
(remove pneumococcus 99.9%)

Remove cause of SHS\* ○  
(remove cause of SHS, radon)

Long term usage ○  
(avg. one year usage)

\* Sick House Syndrome

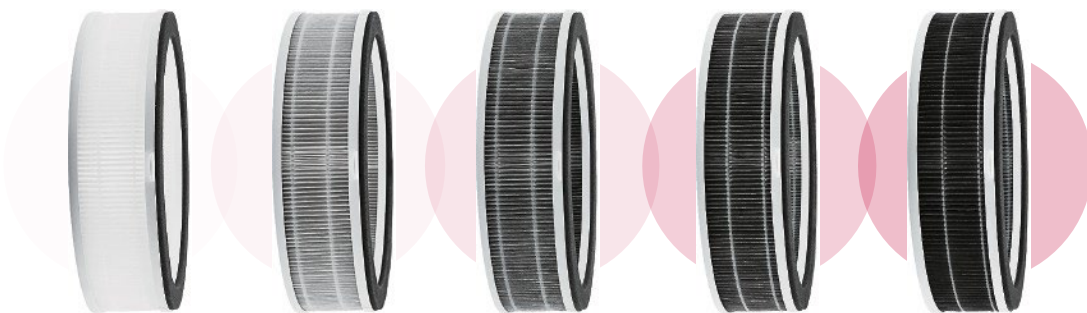
# Unrivaled inherent technology

The patented Nano-fiber filter for ventilation removes fine particulate matter & floating bacteria up to 99.99% removes cause of SHS and radon, prevents mold and condensation Plus, removes unpleasant odors more effectively.



Visible process of air cleaning

New filter    1 month    3 months    6 months    12 months



\* 12 months of use is recommended generally, but the replacement cycle may depend on the usage environment.

# The patented structure provides **convenience** and **gap blocking** at once

By the patented structure, **it can be installed in 10 sec.**

And the gap is completely blocked to prevent fine dust from leaking.

**Perfect compression structure** does not allow air to leak and let it flow only through the filter.

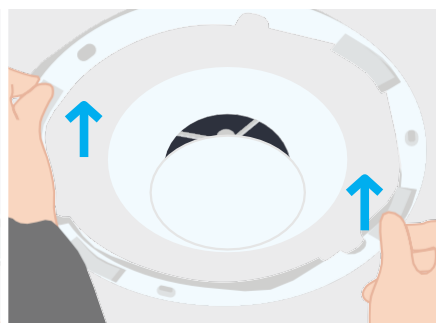
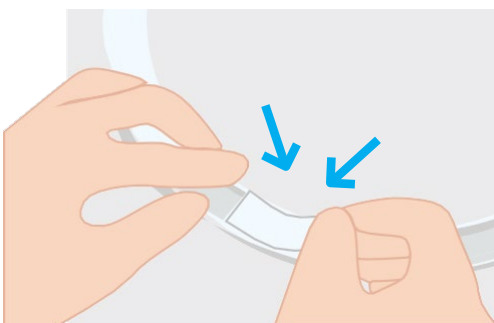


\* Above information is on the basis of the line up of :  
[Aero Shield / Aero Shield S / Aero Shield B]  
and [Aero Vent] is construction type.

STEP1  
Tape it

STEP2  
Push it

STEP3  
Turn it





# Long life ensure economic feasibility

A cylindrical structure, a strong nano-fiber filter, and up to 5x larger filter area than existing filters **minimize the reduction in ventilation rate** due to filter clogging even if it is **used for up to 12 months**.

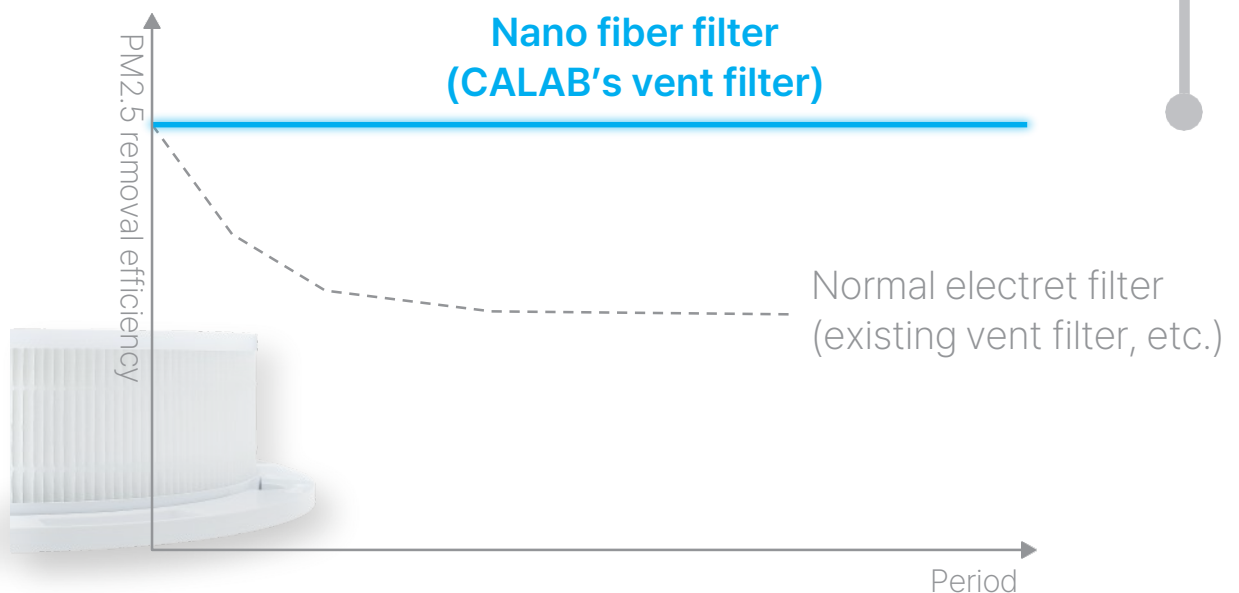


Normal filter area **5X**

CALAB's vent filter area

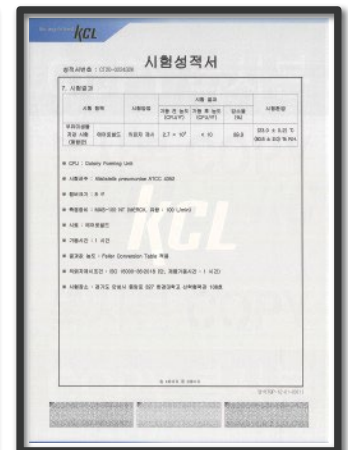


Unlike air purifier/mask filter materials that react with moisture and constantly decrease efficiency, nano-fiber filter materials do not change efficiency by moisture and **maintain the same performance**.



# A reliable and safe product

We have secured about 10 intellectual property rights at home and abroad with related technologies of the design/manufacture of filters used in vent filters.



## Safety! Electric bill! Stop worrying

Our vent filter is **certified** from ISO's bioaerosol reduction certification to KS ventilation filter standard, **so you can use it safe without anxiety.**

The power consumption of the ventilation system is **50~70W**, and **a bill of less than \$3 is generated** when operated for an average of 30 days, 8 hours a day:



World's 1st System Air Purifier

# Ventilation Filter Series

Many are already experiencing it.



<Naver Shopping>  
**CALAB's Aero Shield 1<sup>st</sup>**



<Single product Naver search>  
**Vent filter field 1<sup>st</sup>**



<Naver Search>  
**Vent filter field 1<sup>st</sup>**



<Naver>  
**Avg. satisfaction 9.8**



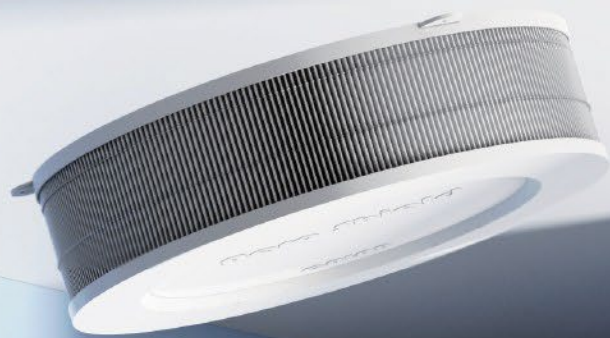
<Smart store>  
**Vent filter field 1<sup>st</sup>**

# Aero **Shield** & Aero **Vent** What differs?

DIY type



Just by attaching on vent  
Ventilate and Purify all at once  
**New concept cylindrical vent filter**



- Can be installed directly by consumers
- Installed on existing air supply vent
- Unit size 240mm
- Special Adhesion Technology  
(Remove cleanly when heated with a dryer)
- Aero Shield/Aero Shield S/Aero Shield B



Construction  
type

Replacing Vent  
**A new concept of  
ventilating purifying diffuser**



- Need installation engineer
- Should remove existing vent first
- Unit size 184mm
- Installed on ceiling  
(Can restore to existing vent cleanly)
- Aero Vent

# Line-up



## Aero Shield

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Just by attaching on vent  
Ventilate and purify all at once  
New concept cylindrical vent filter

Purpose of use :	For home
Filter configuration :	Triple
Applied vent size :	200mm ↓
Replacement cycle :	12 months



## Aero Shield S

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Special version of product with  
high-performance filter removing  
external harmful gases and odor

Purpose of use :	For home
Filter configuration :	Quadruple
Applied vent size :	200mm ↓
Replacement cycle :	12 months



## **Aero Shield B**

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Big & Business Product  
Applicable to ventilation system of  
Commercial space e.g. office/hospital

Purpose of use : For business  
Filter configuration : Triple  
Applied vent size : 400mm ↓  
Replacement cycle : 6-12 months



## **Aero Vent**

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Replacing Vent  
A new concept of  
ventilating purifying diffuser

Purpose of use : For home  
Filter configuration : Triple  
Applied vent size : 200mm ↓  
Replacement cycle : 12 months

# Our Services have no borders

If you would like to find out  
what CALAB's Products can do for you,  
Please contact one of our experts in your area.

**A** A 3511, 97, Centum Jungang-ro,  
Haeundae-gu, Busan, Republic of Korea

**T** +82 051 754 2721

**F** +82 051 754 2728

**E** [minha.han@calab.kr](mailto:minha.han@calab.kr) / [hyein.kim@calab.kr](mailto:hyein.kim@calab.kr)

**://** [aerea.kr](http://aerea.kr)