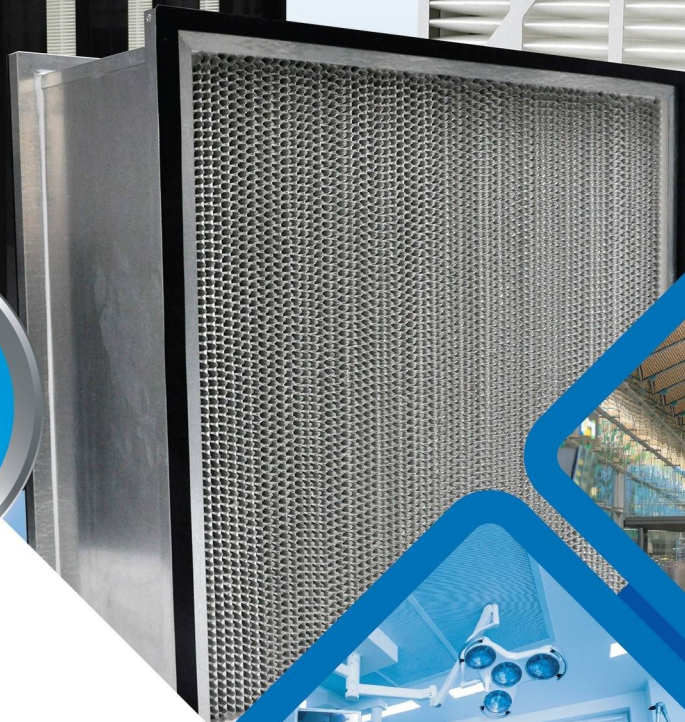




SURE FILTER®



**PURE &
CLEAN**



**HEATING, VENTILATION
& AIR CONDITIONING
FILTERS**

“WHEN FILTRATION MATTERS”

WHY HVAC FILTERS ARE SO IMPORTANT?

About Indoor Air Quality (IAQ)

Indoor Air Quality (IAQ) is strongly connected to health. Humans tend to spend a large amount of time indoors. Breathable air that's free of health threatening pollutants can lead to a higher quality of life, lower risk of respiratory illnesses, and a reduced risk of various chronic conditions.

Indoor air quality (IAQ) is a term which refers to the air quality within and around buildings and environment, especially as it relates to the health and comfort of building occupants. IAQ can be affected by gases (including carbon monoxide, TVOC, formaldehyde), particulates, microbial contaminants (mold, bacteria, virus), that can initiate harmful health conditions.



AIR POLLUTANTS

- Sulphur Dioxide (SO₂)
- Hydrogen Fluoride (HF)
- Ozone (O₃)
- TVOC
- Nitrogen Oxide (NO)
- Carbon Monoxide (CO)
- Hydrogen Sulphide (H₂S)
- Particulate Matter (PM₁₀, PM_{2.5})
- Formaldehyde (HCHO)

THE AIR QUALITY INDEX (AQI)

The Air Quality Index (AQI) is a metric that reflects local air quality based on four pollutants: ozone, particulates, carbon monoxide and sulfur dioxide.

AQI VALUE	AIR QUALITY	COLOR CODE
0 - 50	Good	Green
51 - 100	Moderate	Yellow
101 - 150	Unhealthy for sensitive groups	Orange
151 - 200	Unhealthy	Red
201 - 300	Very Unhealthy	Purple
301 - 500	Hazardous	Maroon

ABOUT PARTICULATE MATTER (PM₁₀ & PM_{2.5})

How small are such particles ?

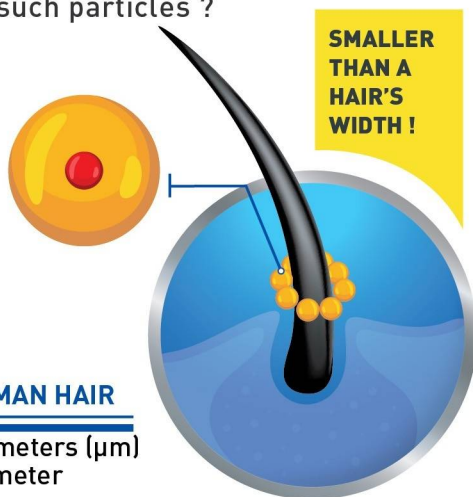
PM₁₀
10 Micrometers (µm) or less in diameter

PM_{2.5}
2.5 Micrometers (µm) or less in diameter

A STRAND OF HUMAN HAIR

50-70 | Micrometers (µm) in diameter

Source: United States Environmental Protection Agency



HOW FAR DO PARTICLES PENETRATE THE BODY ?

100 µm

NOSE

10 µm

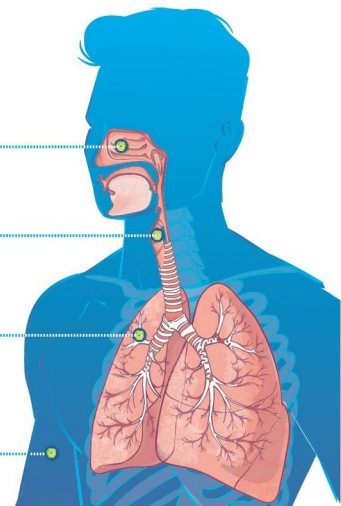
THROAT

3 µm

LUNGS

1 µm

BLOOD



HEALTH INFLUENCE

SHORT-TERM EFFECTS

- Irritation to the eyes, nose, and throat
- URI (Upper Respiratory Tract Infection)
- Nausea
- Bronchitis
- Pneumonia
- Allergic

LONG-TERM EFFECTS

- Lung cancer
- Heart attack, stroke, hypertension
- Chronic-Respiratory disease

Besides gaseous pollutants, the air can also be polluted by particles. These particles have a divergent composition and size which best known as particulate matter (PM).

PM₁₀ and PM_{2.5} is defined as the fraction of particles with an aerodynamic diameter smaller than respectively 10 µm, 2.5 µm, (1 µm = 1 thousandth of a millimeter, 0,001 mm). In comparison, the average diameter of a human hair equals 50-70 µm.

HVAC FILTERS APPLICATION

HVAC (Heating, Ventilating, and Air Conditioning) refers to the different systems used for moving air between indoor and outdoor areas, along with heating and cooling both residential and commercial buildings. They are the systems that keep you warm and cozy in the winter and feeling cool and fresh in the summer. They also are the systems that filter and clean indoor air to keep you healthy and maintain humidity levels at optimal comfort levels

APPLICATION

BUILDINGS

- Residential (Private, Apartment)
- Commercial & Public (Hotels, Airport, Hospital, Shopping Mall, School, etc.)

INDUSTRIAL

- Automotive Industry
- Food & Beverage
- Bio Pharma
- Microelectronic
- Power Plant



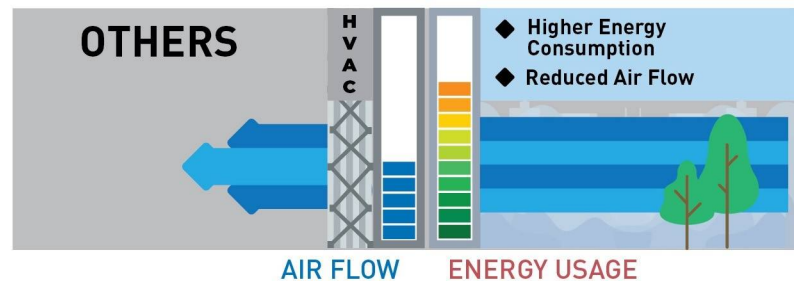
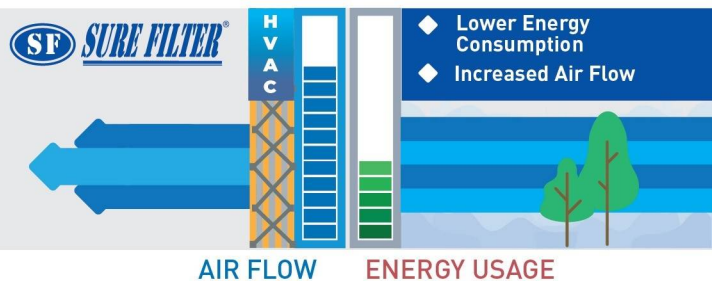
STOP THE PM, BUT CLEAN AIR!

The high quality air filter will stop and filter out the particles in its tracks, and ensure that your indoor environment is a clean and provides cutting edge protection to your health.

FILTER CLASS (EN 779)	PARTICLE SIZE	TYPICAL CONTAMINANT	ISO 16890 (ePM _x)*
G1 >	> 10 μm	Pollen, Spanish moss, dust mites, sanding dust, paint spray, dust, textile fibers, carpet fibers.	Coarse ePM ₁₀
M5 >	3.0 - 10 μm	Mold, spores, hair spray, cement dust, snuff, powdered milk	ePM _{2.5}
M6 >	1.0 - 3.0 μm	Legionella, lead dust, milled flour, coal dust, auto emissions, nebulizer drops, welding fumes	ePM ₁
F7 >	0.3 - 1.0 μm	All bacteria, tobacco smoke, smog, droplet nuclei, cooking oil, copier toner, face powder, paint pigments, VOCs	ePM ₁

* for example, if a filter can capture more than 50% of PM10 particles, it is classified as a ISO ePM₁₀ filter.

SAVE THE ENERGY



HVAC FILTERS TYPES



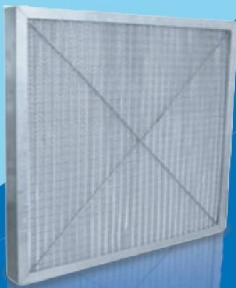
PRE-FILTER

METAL MESH FILTER

- Long Service Life
- Washable
- Low Pressure Drop
- High Temperature Resistance

Application : As a primary filter in industrial level ventilation systems.

Filter Classes : G1, G2 (EN 779)



PRE-FILTER

DISPOSABLE PRE-FILTER

- Robust Construction
- Low Pressure Drop
- Large Dust Load
- High Mechanical Strength

Application : Pre-filter for air conditioning and industrial level ventilation systems.

Filter Classes : G3, G4 (EN 779)



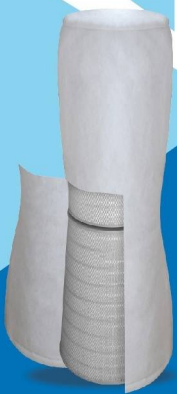
PRE-FILTER

SOCK PRE-FILTER

- Washable
- Polyester, two-stage density
- Sewing, Elastic Rubber

Application : Pre filter for gas turbine

Filter Classes : G4 (EN 779)



PRE-FILTER

POCKET PRE-FILTER

- Rigid Design/Self Supporting
- Pockets
- Metal Frame
- High Mechanical Strength
- Completely Combustible

Application : Pre filtration for large particles in air conditioning & ventilation systems and industrial.

Filter Classes : G3, G4 (EN 779)



MEDIUM/FINE FILTER

POCKET FINE FILTER

- Large Filtering Surface Area
- High Efficiency
- Low Pressure Drop
- Long Operating Time
- High Mechanical Strength

Application : Air conditioning applications and industrial.

Filter Classes : M5, M6, F7, F8, F9 (EN 779)



MEDIUM/FINE FILTER

V-BANK FINE FILTER

- Large Filtering Surface Area
- Long Operating Time
- Low Pressure Drop
- Easy to Install
- High Mechanical Strength

Application : As a primary filter in industrial level ventilation systems.

Filter Classes : M6, F7, F8, F9 (EN 779)

Note : Compact filter with flange, box.



HVAC FILTERS TYPES

MEDIUM/FINE FILTER

SEPARATOR FINE FILTER

- Long Service Life
- Washable
- Low Pressure Drop
- High Temperature Resistance

Application : Air conditioning applications and industrial.

Filter Classes : M6, F7, F8, F9 (EN 779)

Note : Compact filter with aluminium separators



HEPA FILTER

SEPARATOR HT FILTER

- High Temperature
- High Mechanical Strength
- High Efficiency
- High Air Volume

Application : Protection of clean processes at high temperatures.

Filter Classes : H13, H14 (EN 1822) / M6, F8 (EN 779)



HEPA FILTER

V-BANK EPA/HEPA FILTER

- High Air Flow
- Low Pressure Drop
- High Efficiency
- Tested According to Standard EN 1822

Application : Very high efficiency final filtration in air conditioning systems and industrial.

Filter Classes : E11, H13, H14 (EN 1822)



HEPA FILTER

SEPARATOR HEPA FILTER

- High Mechanical Strength
- Large Filtering Surface Area
- Long Operating Time

Application : HEPA Filter for standard applications.

Filter Classes : H13, H14 (EN 1822)

MPPS Efficiency : $\geq 99,95\%$, $\geq 99,995\%$



HEPA FILTER

MINI-PLEAT HEPA FILTER

- Large Filtering Surface Area
- High Efficiency
- Low Pressure Drop
- Long Operating Time
- High Mechanical Strength

Application : Microelectronic clean rooms and equipment. Low energy usage.

Filter Classes : H13, H14 (EN 1822)

MPPS Efficiency : $\geq 99,95\%$, $\geq 99,995\%$



HEPA/ULPA FILTER

GEL HEPA/ULPA FILTER

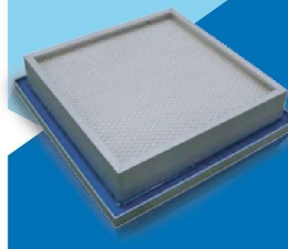
- Leak Tightness by Means of Gel
- Low Pressure Drop
- Very High Efficiency
- Easy to Install
- Tested According to Standard EN 1822

Application : Microelectronic clean rooms & equipment. Low energy usage.

Filter Classes : H14, U15 (EN 1822)

MPPS Efficiency : $\geq 99,995\%$, $\geq 99,995\%$

Note : HEPA/ULPA fluid sealing filtering panel



HVAC FILTERS TYPES

ULPA FILTER

MINI-PLEAT ULPA FILTER

- Low Pressure Drop
- Very High Efficiency
- Long Operating Time
- Tested According to Standard EN 1822

Application : Microelectronic clean rooms and equipment.

Filter Classes : U15, U16 (EN 1822)

MPPS Efficiency : $\geq 99,9995\%$, $\geq 99,99995\%$



CHEMICAL FILTER

V-BANK ACTIVATED CARBON FILTER

- Low Pressure Drop
- Robust Construction
- Rapid Adsorption Dynamic (RAD)
- 100% Incinerable

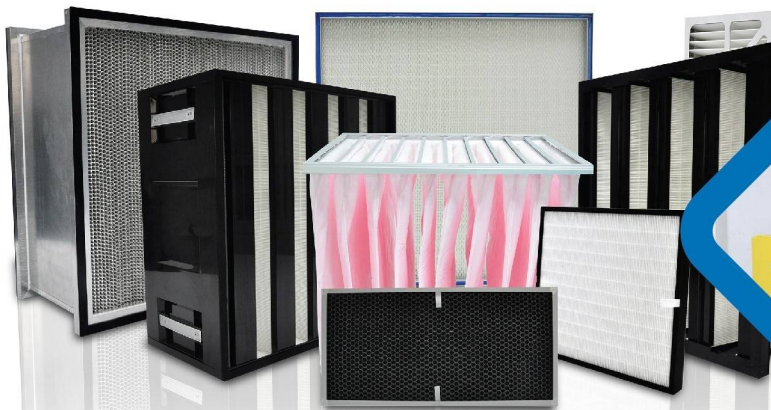
Application : Removes the odor and the pollution gases with the ventilation of the air condition system, as the office, hotel, hospital, airport, electronics workshop, etc.

Filter Classes : M6 - F9



SURE FILTER®

www.surefilter.com



For more information, please contact our authorized distributor/agent

