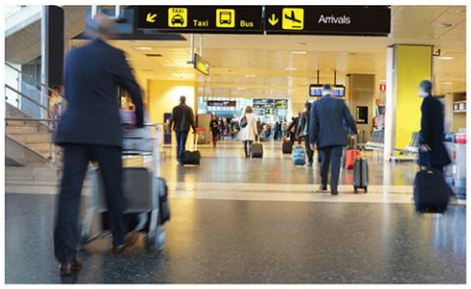
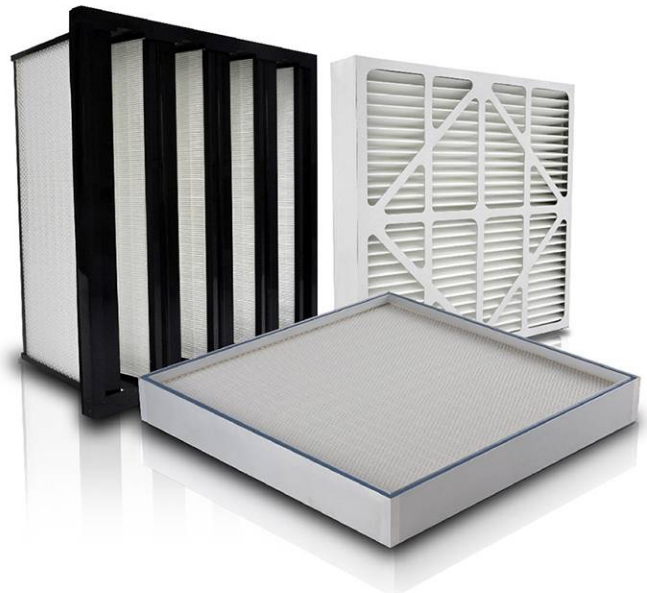
SAKURA S/F ®

SAKURA

AIR FILTRATION

IN HVAC (HEATING, VENTILATION, & AIR CONDITIONING) SYSTEMS





*"**Ventilation and Filtration** provided by heating, ventilating, and air-conditioning systems can **reduce the airborne Concentration of SARS-CoV-2** and thus t**he risk of transmission through the air."***

www.ashrae.org

WHY WE NEED HVAC FILTERS?

ABOUT INDOOR AIR QUALITY (IAQ)

Today, air pollution around the world, specially in towns and cities harms our health and contributes a number of global premature deaths. Breathing quality air is critical for good health, even breathing indoors.

Most people spend their time indoors--either in the home, office or other types of buildings--where gas, chemical and other pollutants can cause many diseases. Serious pollutants can cause certain types of cancers, respiratory diseases, and other long-term health complications.

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, PM2.5)
- Formaldehyde (HCHO)

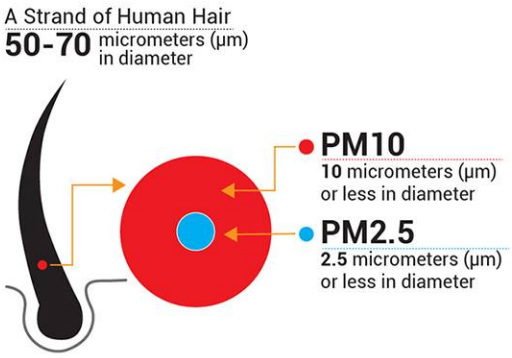
THE AIR QUALITY INDEX (AQI)

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, PM2.5)

HOW SMALL ARE SUCH PARTICLES?



Source: United States Environmental Protection Agency

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 PM2.5, is defined as the fraction of particles with an aerodynamic diameter smaller than respectively 10 µm and 2.5 µm (1 µm = 0,001 mm or 1 thousandth of a millimeter). In comparison, the average diameter of a human hair equals 50-70 µm.

HEALTHY INFLUENCE BY PARTICULATE MATTER (PM)

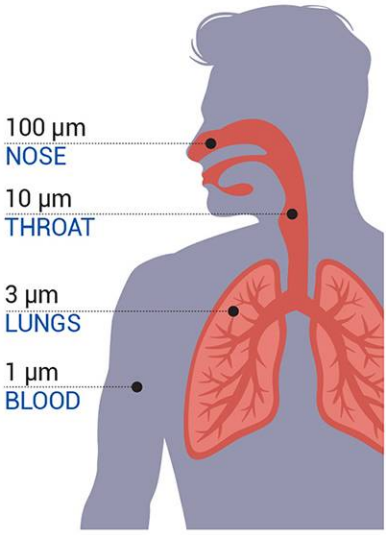
HOW FAR DO PARTICLES PENETRATE THE BODY?

SHORT-TERM EFFECTS

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

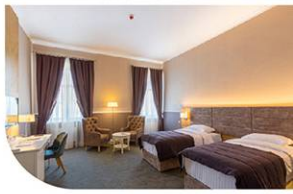
LONG-TERM EFFECTS

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



Air pollution affects everyone. However, young children, pregnant woman, and elderly are especially most vulnerable to air pollution.

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
- Power Plant

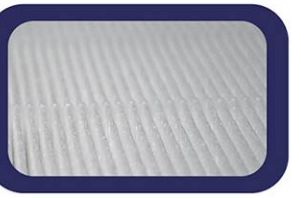
LET NOTHING ELSE IN, BUT CLEAN AIR!

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.

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

** for example, if a filter can capture more than 50% of PM10 particles, it is classified as a ISO ePM_{10} filter.*

Sakura HVAC Filter uses the Glass Fiber and Nano Fiber media to provide high efficiency filtration.



PRODUCTION & LABORATORY FACILITIES

Sakura Filter products are made by our companies that are certified to the IATF 16949 Quality Management System and ISO/IEC 17025:2017 accredited laboratory, to create high quality filtration products consistently.

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
- Water Repellent

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 and ventilation systems and industrial.
Filter Classes : G3, G4 (EN 779)
Note : Also available with plastic frame.

MEDIUM/FINE FILTER

Pocket Fine Filter

- Large Filtering Surface Area
- High Efficieny
- 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 : Intake air filtration for gas turbine, industrial ventilation, and air compressors.
Filter Classes : M6, F7, F8, F9 (EN 779)
Note : Compact filter with flange, box.

HVAC FILTERS TYPES

MEDIUM/FINE FILTER

Separator Fine Filter

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

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

HEPA FILTER

V-Bank EPA/HEPA-Filter

- High Air Flow
- Low Pressure Drop
- High Efficieny
- 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 : ≥99,95%, ≥99,995%

HEPA FILTER

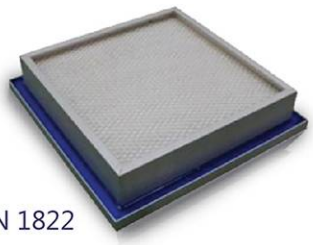
Mini-Pleat HEPA-Filter

- Low Pressure Drop
- High Efficieny
- Easy to Install
- Tested According to Standard EN 1822

Application : Microelectronic clean rooms and equipment. Low energy usage.
Filter Classes : H13, H14 (EN 1822)
MPPS Efficiency : ≥99,95%, ≥99,995%

HEPA/ULPA FILTER

Gel HEPA/ULPA-Filter



- Leak Tightness by Means of Gel
- Low Pressure Drop
- Very High Efficieny
- 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 : ≥99,995%, ≥99,995%
Note : HEPA/ULPA fluid sealing filtering panel

HVAC FILTERS TYPES

ULPA FILTER

Mini-Pleat ULPA-Filter

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

Application : Microelectronic clean rooms and equipment.
Filter Classes : U15, U16 (EN 1822)
MPPS Efficiency : ≥99,9995%, ≥99,99995%

CHEMICAL FILTER

V-Bank Activated Carbon Filter

- Low Pressure Drop
- Robust Construction
- Rapid Adsorpion 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

ADR GROUP OF COMPANIES

PT SELAMAT SEMPURNA TBK
Member of ADR Group of Companies

IATF 16949 ISO 14001

KAN Komite Akreditasi Nasional
ISO/IEC 17025:2017
LP-159-IDN

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