



Proposal for Implementation of COVID protective measures and Air De-Contamination





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ESAPLLING

Being ESAPLLING, we apply innovative techniques and ideas in an ever changing industry, one of our major strength is our capability and confidence to provide value-added service – product installation, site commissioning, to handle any project, regardless of size or complexity, from inspection, through budgeting, to design, execution, validation and hand over

A "Make in India" entity driven with a vision to be part of Everyone's life.

We do have 3000+ dealer network in India and Overseas, with the experience and Service network we do serve all our customer across PAN India, rating a 100 % satisfaction.

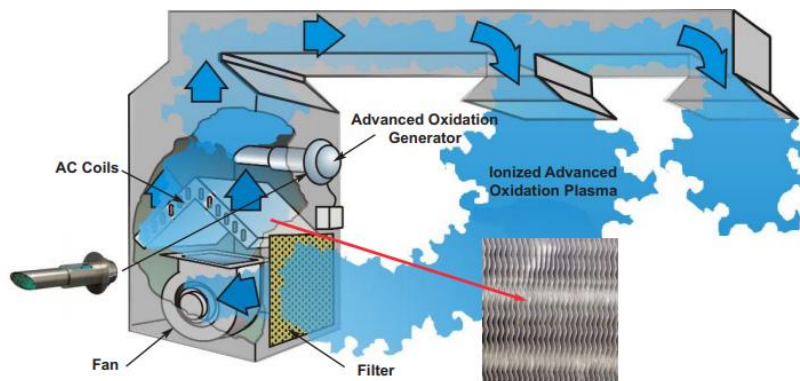
Our products been affiliated by US FDA, CE, BEE, GMP, ISO, RoHS, FDA.



Ephox

Ephox is a filter powered by ESAPLLING with Oxidation is technically defined as the losing or the giving up of an electron. It can involve very complex reactions between molecules and the oxidizers that are produced. For this article we will keep it simple and only look at some of the interactions between oxygen molecules and the different substances that they may contact. Controlled oxidation is an excellent way to destroy organics such as odors, viruses, bacteria, VOC's and mold.

Ephox is a hybrid active air purification technology that produces a family of highly Reactive Oxygen Species, which purify the air as well as the surface. It is recommended for large spaces to control grating smells and allergens. The technology reduces the bio-aerosol burden in the air, consequently, diminishing the cross-infection pathogen load significantly.



Specifications

Typical Test Results PHI Technology Hydroperoxide levels of .01-.02 ppm

	Virus	99%
	Bacteria	99%
	Odors	55% - 98%
	Mold	97% - 98%
	VOCs	80% - 99%
	Smoke	70%



Features

- Highly effective against
 - Microbes (Bacteria, Virus, Mold, Allergens)
 - VOCs & Gasses (Formaldehyde, H
 - Particles (Dust, Dander, Pollen)
 - E-smog (Static Electrical Charge)
 - Odor (Malodor, Pets, Rotten Food, etc)
- Higher absorption of O2 by the lungs.
- Improved Breathing
- Reduction in Cross Contamination
- Enhanced Texture, Elasticity & Moisture content of the skin
- Saves Energy
- Hybrid Technology.
- Active Air Purification System.
- Life of minimum 18000
- UL, CSA, EN, CE, ROHS Certified.
- EMSL Tested.

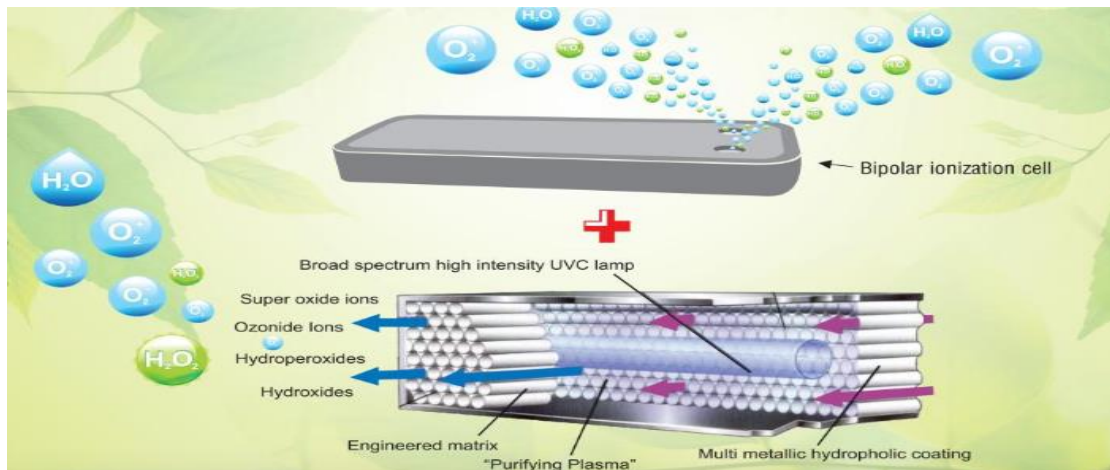
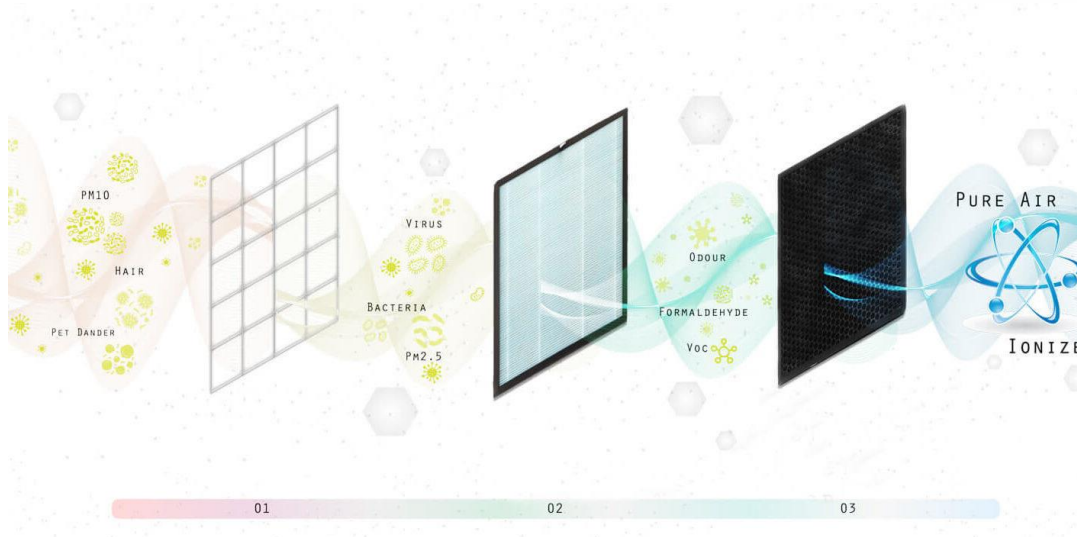
AFOX - Filters

AFOX is a highly activated Carbon Filtration technology filter, specially designed by ESAPLLING and are used for removal of odor and contamination. AFOX activated carbon filters having excellent absorption are used in different air ventilation systems, low pressure drop areas, large surface having.



Specifications

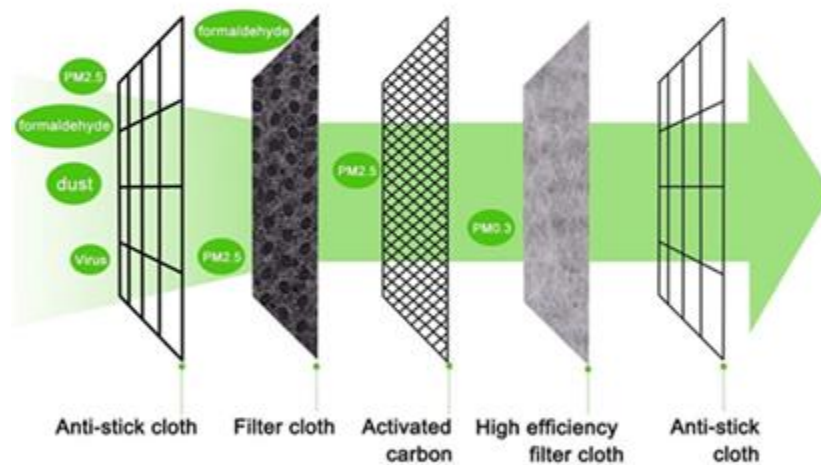
- Frame: Aluminum / G.I
- Thickness: 150mm,305mm
- Type: Cassette & Flange Type both
- Media: Synthetic Media/ Polyester Fiber



Features

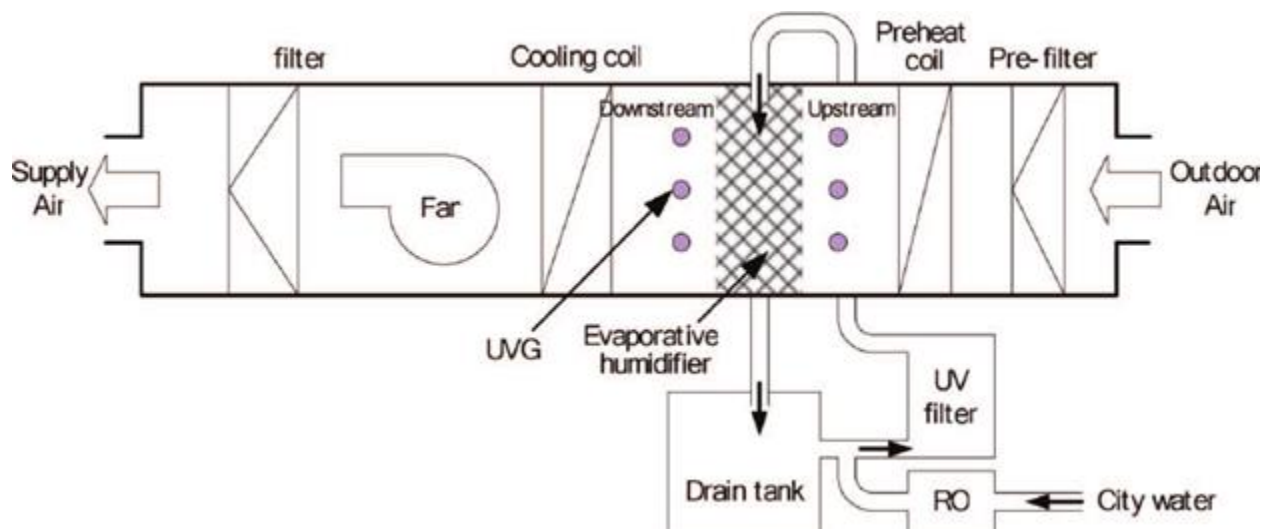
- Adhering granule activated carbon on sponge
- Adsorb and eliminate harmful gases
- Large surface area and High carbon content
- Integrated particle filter for the retention of oil vapors, hydrocarbons, and odors.
- High adsorption capacity and retention with low differential pressure.
- Capture and remove unwanted or harmful VOCs from indoor personal

**Afox filter with 99.88 % efficiency .
Removes Chemical Particles, Gas fumes
Pollutants and smoke particles**



Aktion Filters

Aktion is a powerful air purification technology that disinfects the air by emitting UV rays using Ultra Violet Germicidal Irradiation technology by emitting UV rays in the range of 254 nm (UV-C band). Designed and developed by ESAPLLING, these rays disrupt the DNA of the micro-organisms, preventing them from reproducing, and thereby killing germs. Several options are available for its implementation in projects, such as standalone units, on coil, in-duct or in-room.



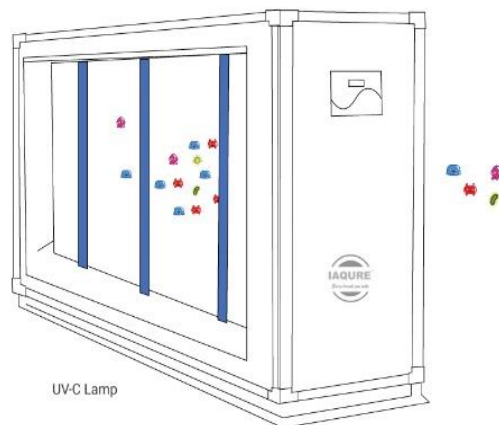
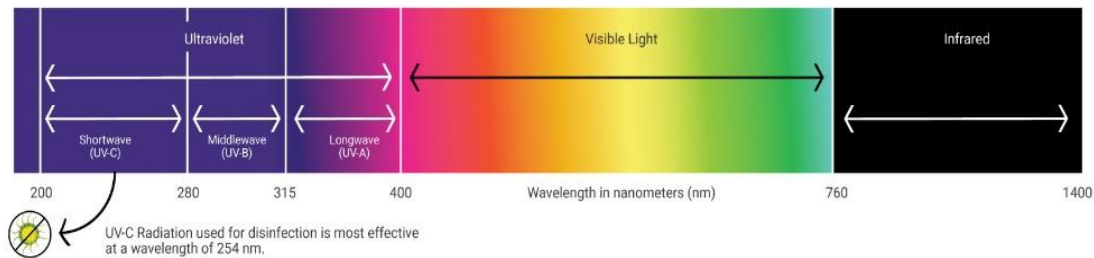
Specifications

- Control Infection
- Cost Effective
- Ready to Use
- Saves Energy
- Proven Technology

Features

- Designed in accordance with ASHRAE recommendation for COVID
- Ultraviolet Air and Surface Treatment standards
- Ultra Violet Germicidal Irradiation
- Dual lamp & dual ended lamp holder for enhanced safety and vibration protection.
- Inbuilt electronic type ballast with life rated for more than 15000 starts
- Automatically regulate the UV Lamps when the airflow is detected.
- Laboratories
- Food & Beverage Industry
- Clean Room Applications
- Offices

Light Spectrum





Air Muller (Split, Cassette, Fan Coil Unit)

The Central Air Muller are the Cleaner Series which offers very low airflow resistance with high filtration efficiency on PM 2.5 & bio-aerosols. The units are effective in reducing high concentration of airborne dust ranging from 0.1 - 10.0 m in size.

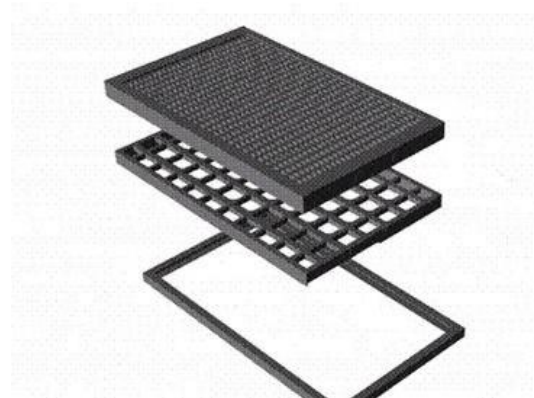
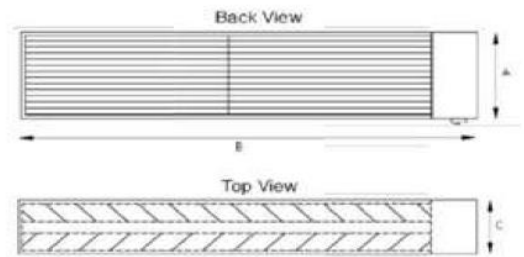
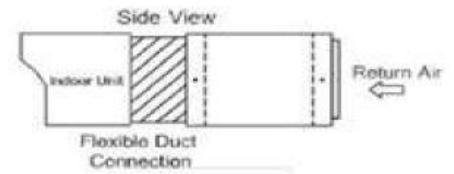
They provide up to high filtration efficiency on PM2.5 by cleaning the air through the principles of impingement, polarization and agglomeration. The air cleaners can integrate with a wide range of air conditioning units to centrally capture and kill airborne contaminants. The filtration system includes advanced controls for ease of installation and maintenance.

Specification

- High efficiency filtration system with very low airflow resistance.
- Equivalent to MERV-11 efficiency in recirculating system
- Meets LEED standard for IEQ Credit 5.1 requirement.
- Green Product Certified by IGBC
- Complies US EPA acceptable

Features

- Complete air quality improvement (Dust particles, microbial, chemical gasses reduction)
- High efficiency filtration system with very low airflow resistance.
- Designed in accordance with ASHRAE recommendation for SARS-CoV-2 (COVID-19) protection, following chapter 62 Ultraviolet Air and Surface Treatment, 2019 ASHRAE Handbook.
- Kill rate of micro-organisms, tested in accordance with ASTM E2149 standards.
- High Dust collection efficiency: at pressure drop of less than 0.20" wg @ 2.5 m/s.
- Tested in accordance with ASHRAE 52.2 2017 and ISO 16890 standards.
- Meets LEED standard for IEQ Credit 5.1 requirement.
- Green Product Certified by IGBC.
- Complies US EPA acceptable limit of Ozone (within 0.05ppm levels).
- Tested according to AHAM AC-1 and GB/T 18801 Annex C.
- Interlocks with AHU through a pneumatic sensor.
- Built on trap and kill technology system.
- Includes cleanable type filters having a long life resulting an efficiency upto 99.88 %



Air Filters



Cassette ad VRF



Air Handling Unit – Filters

Monitoring, Alert & BMS Integration :

AeroStar, first of its kind portable particle counter with 0.1 micron sensitivity and 1.0 CFM (28.3 LPM) flow rate using laser diode technology. Over conventional HeNe (Helium Neon) particle counters which require frequent cleaning, periodic laser tube replacement and suffer's from low concentration limits.

AeroStar is designed to operate in ISO Class 1 to Class 7 cleanrooms without concerns of it degrading its environment or exceeding concentration limits.



Features :

- Alert – Generates alert incase of threshold exceeded
- Integration : BMS integration is possible and reports can be generated.

Certification:

- NABL certificates would be produced part of validation of the filters
- All Products and service are certified and holds a warranty certificate.
- ESAPLLING products are certified as per below standards.

