EFX active electrostatic filter - a Hi-Tech solution for ventilation systems.

Many studies have shown that the major problems in ventilation systems turn out to be the reduction of air flow that occurs after a certain period of operation.

Often after 2-3 years, the air introduced is reduced as much as 30% of its original value, while the volume of the outlet flow may decrease by 40%.

This fact is certainly not acceptable. It is usually caused by the accumulation of dust and dirt on fans, batteries, ducts and other components.

This contamination is an ideal breeding ground for the proliferation of bacteria, microorganisms and molds which, therefore contributes to making the ventilation system unhealthy.

In addition, a flow reduction means that the ventilation system does not satisfy one of its primary functions.

Frequently we see that the presence of fine and ultrafine indoor environments reach higher values than those encountered outdoors.

There are two solutions to these problems: increasing the cleaning of the air handling unit, batteries, fans and ducts, or improving the filtration system.

The active electrostatic filter makes filtration possible into fine particles (PM 2.5), ultrafine (PM 1) and nano (PM 0.4) It is the ideal choice for those who want to get a ventilation system with a high degree of air hygiene.

Maintenance costs are markedly reduced. It has a large storage capacity (600g) and, last but not least, air flow rates and efficiency remain constant over time.

The active electrostatic filters come in four degrees of filtration (A, B, C, D). The efficiency is taken into account by the UNI 11254. E_m is the average efficiency of DEHS particle size of 0.4 microns.

The special characteristics of the active electrostatic filters:

- Efficiency to the micro and nano powders
- Low pressure drop, basically unchanged from beginning till end
- Markedly antibacterial and antifungal.

A homogeneous comparison with mechanical filters (series F or H) is not possible.

Nevertheless, the filters can be combined with EFX mechanical filters (F or H) based on their performance and depending on the size of the particles.

Example: to obtain high efficiency towards powder, an ultra-thin (0.2-0.3 µm) filter type will be chosen, F8-F9 or H10-H11-H12, depending on applications.

What does it mean to have high efficiency over the entire spectrum of powders from 0.12 to 5 µm?

- High hygienic air quality to prevent the formation of bacteria, spores, mould, viruses, etc.
- Safeguard systems (exchanging batteries, ducts, etc.). In return - low maintenance costs.

The high efficiency of the active electrostatic filter responds in a perfect way from a performance point of view.

99.9% of all particles present in the atmospheric air are less than 1 micron.

NB: The ultra-fine powders and nanopowders are the most dangerous to health as they reach the pulmonary alveoli and from there into the blood-stream. They are the hardest to catch.

A strong filtering action of the thin air allows dust to act decisively on the prevention of many serious illnesses related to the effect of nano-mineral dusts such as chromium, iron, lead, etc. (New medical discipline of nanopathology).

The choice of filters is particularly effective against the ultrafine powder and a guarantee for the decontamination of microorganisms (bacterial viruses) in the air. (Sick building syndrome).

The choice of a filter which is inappropriate for the air handling unit will make the system perform inefficiently since most of the dust contained in the ultrathin air will pass and enter the bloodstream.

This causes fouling of the battery, the fan, duct and the whole environment. The choice of a high efficiency filter considerably reduces the effects mentioned above.