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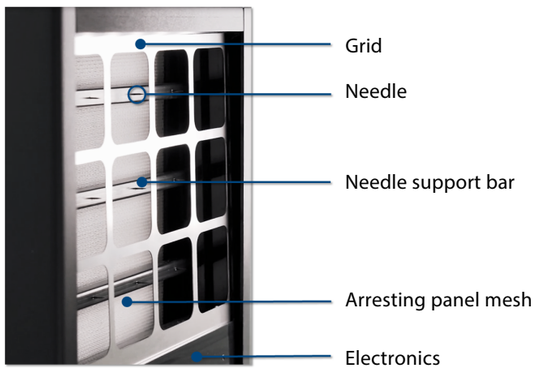
MERAK INTENSE FIELD DIELECTRIC

ELECTROSTATIC FILTER CLEAN[AIR] TECHNOLOGY

MERAK

MIFD (Merak Intense Field Dielectric)

The MIFD uses the principle of a strong dielectric field to purify air. This technology charges dust and other particles with static electricity, and then uses the filter element with electrodes for adsorption.

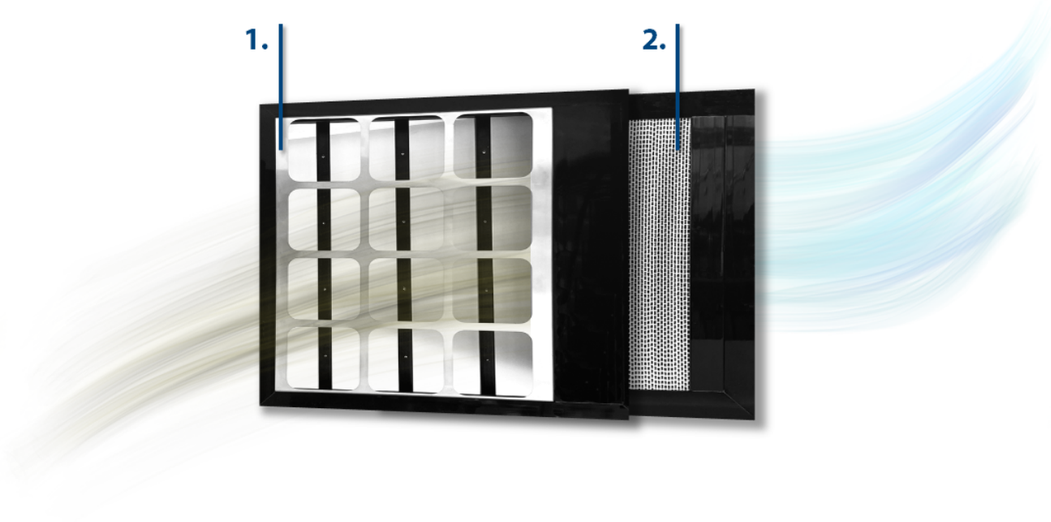


1. Ionizing panel

The needles (electrodes) located in the center of the grid holes, produce an electrical field and charge the particles within the air flow.

2. Arresting panel

Then, the charged particles are arrested by the high strength electrical field of the arresting panel.



Value Proposition

Efficient against PM 2.5 (99%) and PM 0.3 (95%).
Similar performance to an EPA filter, but with low pressure drop.

Technical Specification

Ionizing panel
This module has a metal grid as the negative electrode and a group of electrode pins as the positive electrode. It charges the particles by a high-voltage electric field, to make the arresting panel more efficient.

Arresting panel
In this multilayer, electrodes are included and arranged alternately. Charged particles are captured by each lattice due to electrostatic adsorption.

Electrical

- The MIFD operates using 24 VDC supplied within the HVAC Unit

Product Details

- Dimensions can be customized according to each project
- Operating temperature: -20°C to +50°C

Compliance Standards

- Shock & vibration test (S&V) IEC 61373:2010
- Electro Magnetic Compatibility test (EMC) EN 50121-3-2:2016

Power Consumption

- 7W

Typical preventive maintenance task

- Cleaning the whole module with water at the same time interval of replacing the prefilter, in case of prefilter (MLLF) class equal to ePM10 50%
- It is recommended to replace the complete MIFD filter module approximately every 5 years to ensure adequate filtering efficiency