Isolation/Filtration Systems

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EEF FILTERS MAKE AIRBORNE PATHOGEN CONTROL COST EFFECTIVE

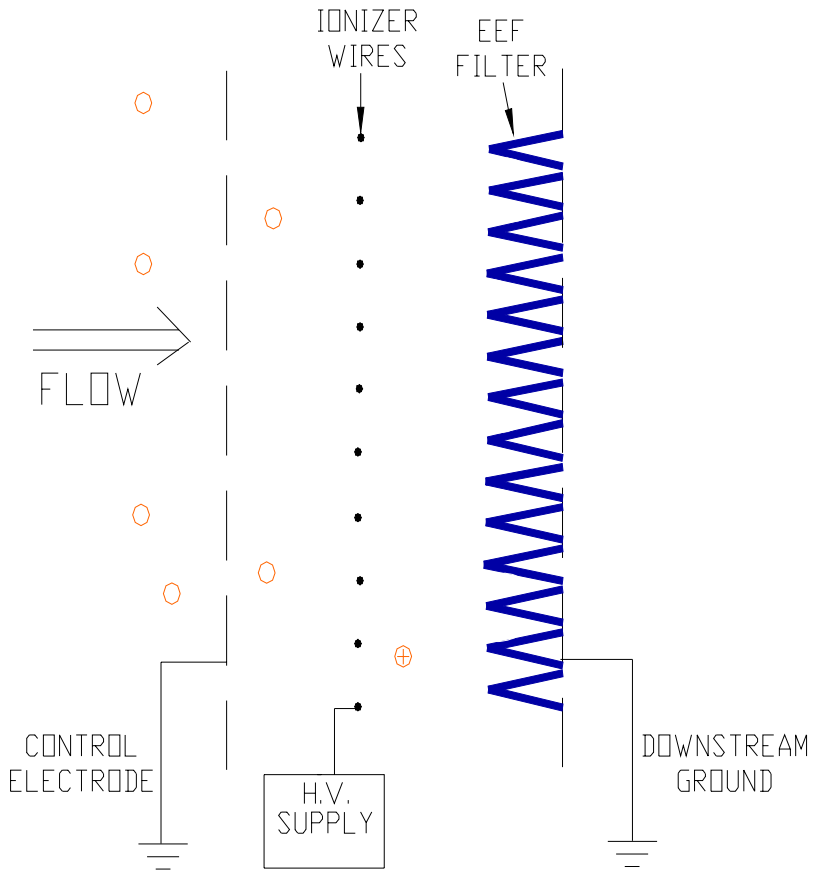
- Bactericidal* filtration
- Enables negative/positive pressure without external fan
- Filter has enough power for double HEPA filtration air re-circulation and exhaust
- This system exceeds CDC guidelines for AFB isolation
- Results in significant energy savings for isolation rooms

***** Based on independent laboratory test w/ *E. coli* and *Staph. epidermidis*

MODEL 3001X shown above

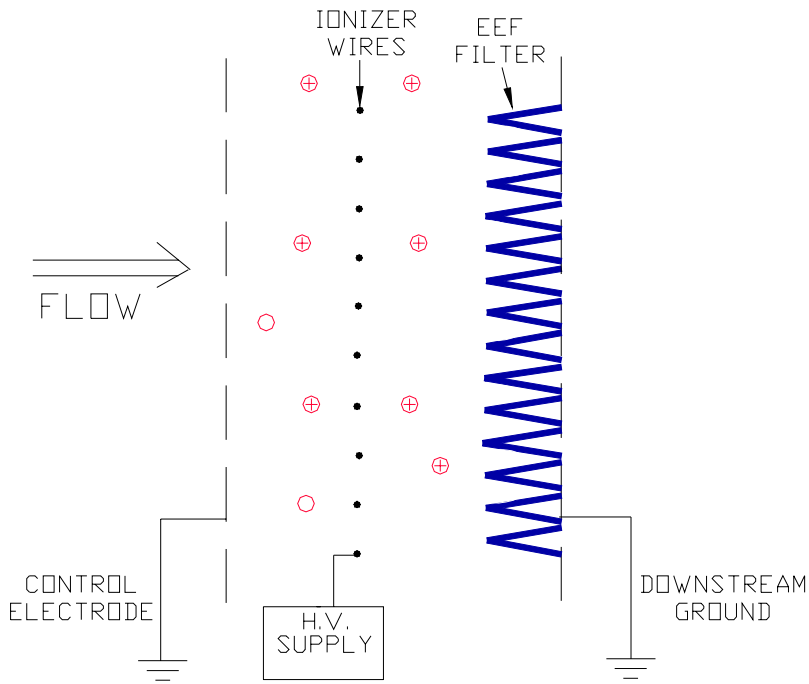
Principle of Operation-EEF Technology

Flow enters first high intensity ionizing field.



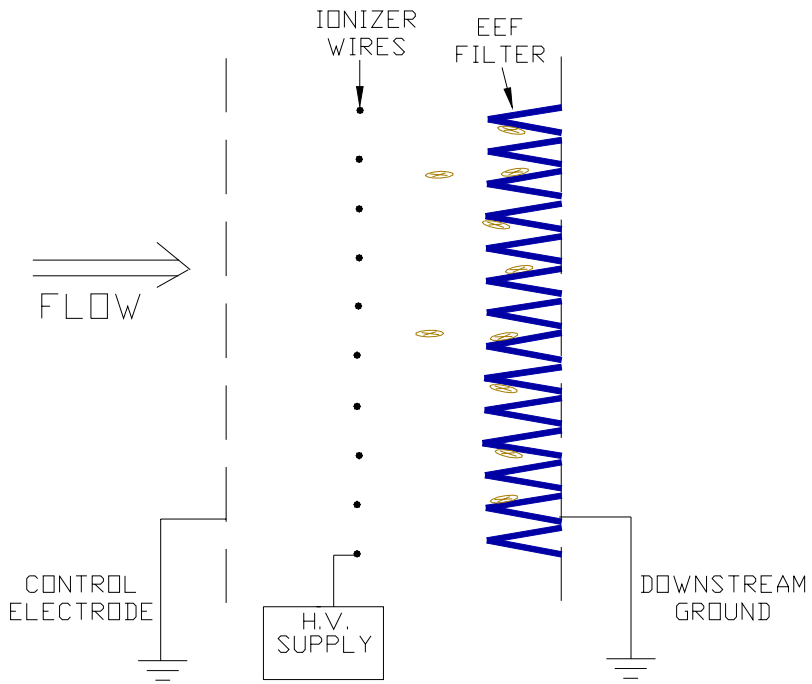
EEF Technology continued……

Particles and bacteria are charged due to ion flux in this ionizing field - some of the bacteria are killed here.



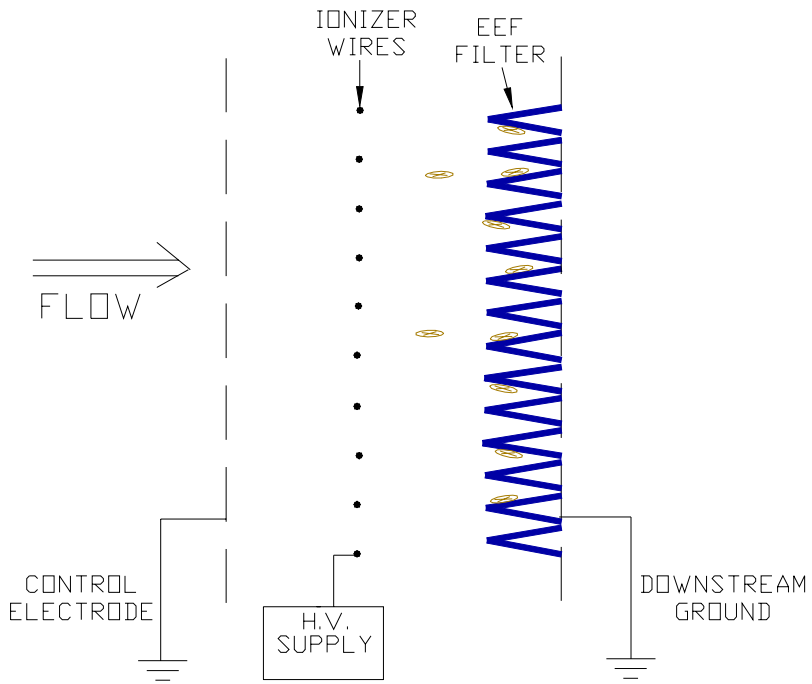
EEF Technology…continued

The charged particles and bacteria are highly efficiently filtered - up to 1000 times lower penetration than conventional filters with the same pressure drop and flow rate.



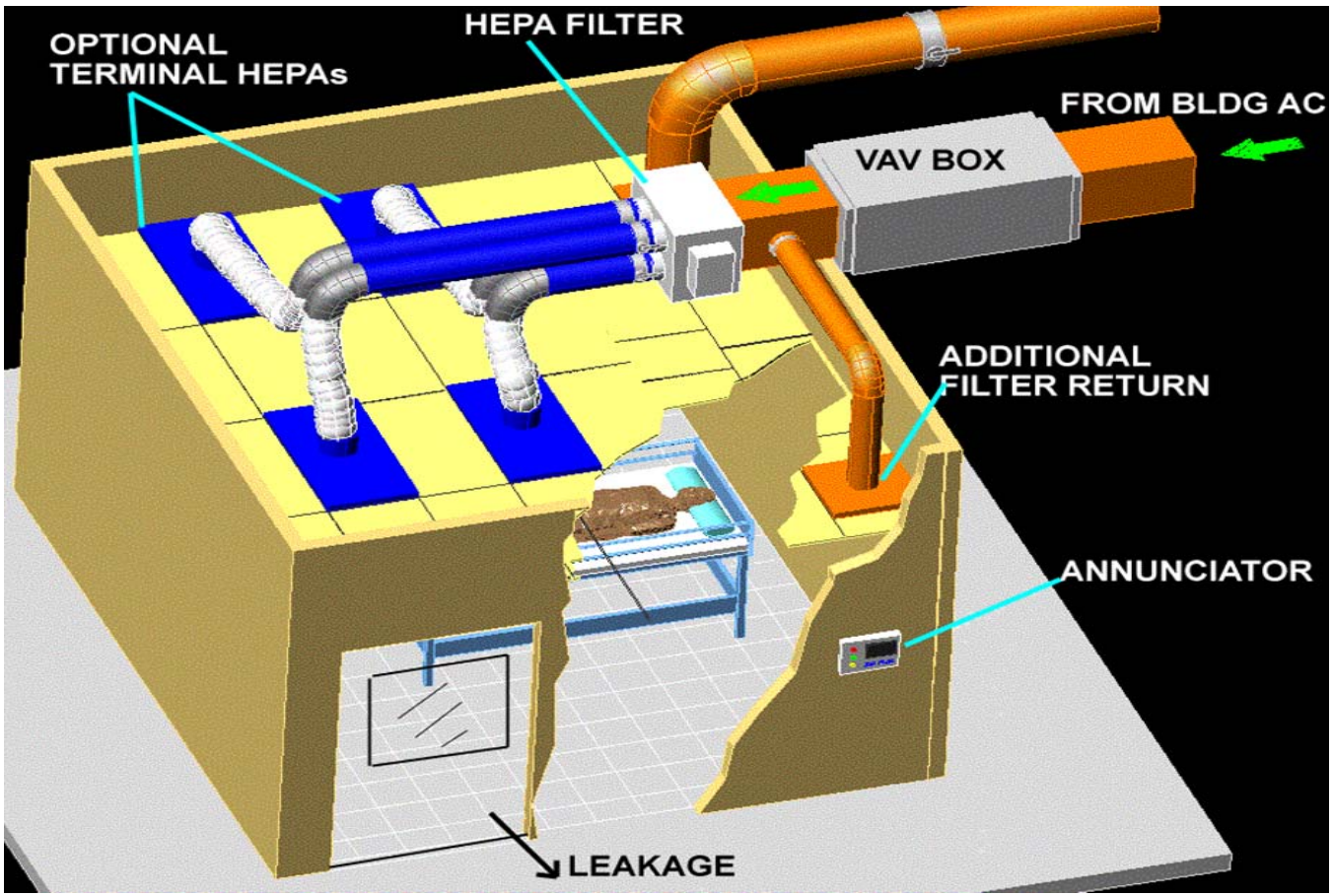
EEF Technology…continued

Bacteria caught on the filter are subjected to a continuous dose of ionizing radiation and are thus killed*.

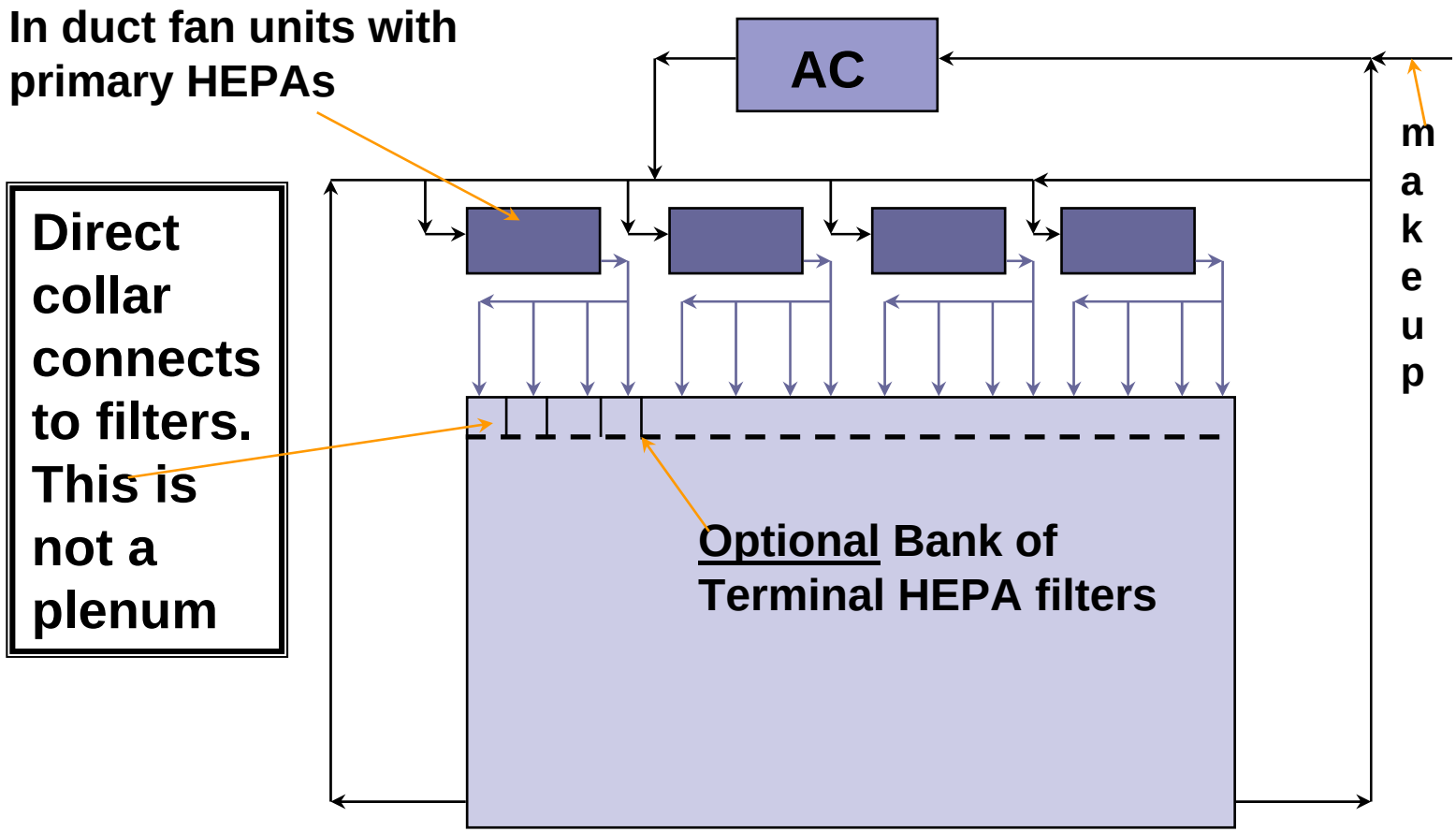


* Based on independent laboratory test w/ *E. coli* and *Staph. epidermidis*

Negative Isolation w/ VAV/ Central AC supply - Integrated



Distributed Air Handling Design



AFB ISOLATION THAT GREATLY REDUCES RISK AND PAYS FOR ITSELF

- Filter system rated at 99.999999+% DoP- Provides virtually particle free air - the room performs as a Cleanroom.
- Bactericidal* – low bioburden in the room.
- Maintains proper negative pressure - min -ve pressure of -0.02”WC.
- Significantly reduces operating costs.

***** Based on independent laboratory test w/ *E. coli* and *Staph. epidermidis*

How Much Filtration Efficiency is Needed?

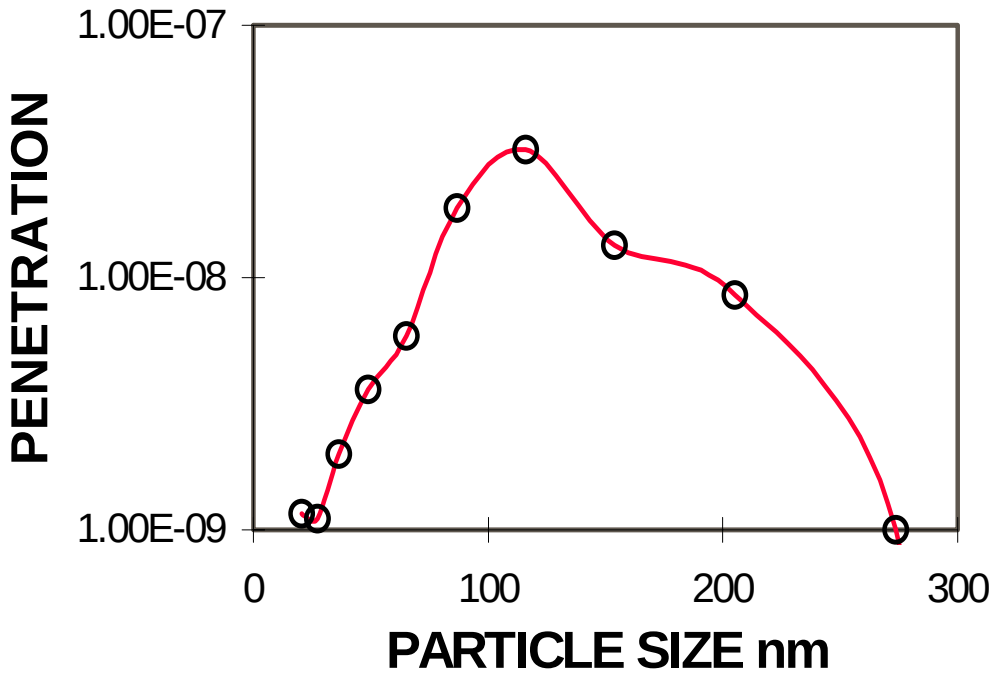
# of particles/ft3 entering the filter	# of particles penetrating single HEPA Filtration-99.99%	# of particles penetrating double HEPA Filtration – 99.999999%
1 million	100 per ft3	~0 per ft3
10 million	1,000 per ft3	~0 per ft3

Point of reference: Indoor air has 500,000-1MM 0.3 Um particles/ft3

Outdoor air in urban areas can be much higher

Performance of EEF HEPA with Terminal HEPA filters

Due to low flow restriction, EEF filters can be used with terminal ceiling HEPA filters (Double HEPA filtration) to obtain virtually particle free air.



Comparison to Ventilation
.....a cleaner environment

Feature	Ventilation	EEF BIO PLUS®
ACH*	12 (CDC)-24	64
0.3 Um Filtration Efficiency	50% w/ 95% ASHRAE	99.999999+% DOP
Est. Particle Conc #/ft3	300,000-1 MM	10,000

*Based on 10x10x8 room size